This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

A 413544

ARTES
VERITAS
SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE

MEDICAL COMMUNICATIONS

OF THE

MASSACHUSETTS MEDICAL SOCIETY.

WITH AN APPENDIX,

CONTAINING THE PROCEEDINGS OF THE SOCIETY.

VOLUME SIXTH.

SECOND SERIES.—VOLUME SECOND.

BOSTON:
PRINTED FOR THE SOCIETY.
1841.

WILLIAM S. DAMRELL, PRINTER,
No. 11 Cornhill, ... Boston.

CONTENTS.

Page.

ANNUAL DISCOURSE FOR 1837. On some of the Diseases of the Knee-Joint. By GEORGE HAYWARD, M. D. 1

Observations on the Influence of Stagnant Water and Air upon Health. By DANIEL OSGOOD, M. D. 29

ANNUAL DISCOURSE FOR 1838. Historical Sketch of the Origin and Progress of the Massachusetts Medical Society. By EBENEZER ALDEN, M. D. 33

A Report, founded on the Cases of Typhoid Fever, or the common continued Fever of New England, which occurred in the Massachusetts General Hospital, from September, 1821, to the end of 1835. By JAMES JACKSON, M. D. 79

On the Treatment of Delirium Tremens. By JOHN WARE, M. D. 175

ANNUAL DISCOURSE FOR 1839. On the Typhoid Fever of New England. By ENOCH HALE, M. D. 183

ANNUAL DISCOURSE FOR 1840. On Fractures. By A. L. PEIRSON, M. D. 261

NOTES.—Biographical Notice of Dr. Mather, ... 333
" " " Dr. Belden, ... 335
Tables of Fractures in the Mass. General Hospital, . . 348

ANNUAL DISCOURSE FOR 1841. On the Present Condition, Prospects and Duties of the Medical Profession. By EDWARD REYNOLDS, Jr., M. D. 369

NOTES.—Extracts from Hahnemann's Organon, ... 407

139637

APPENDIX.

Page.

Proceedings of the Society at the Annual Meeting, May, 1837, . 1
" " Counsellors for the year 1836 to 1837, . . . 6
Officers for 1837, ... 23
Honorary Members elected, and Fellows admitted, from June, 1836, to June, 1837, ... 25
Proceedings of the Society, May, 1838, ... 27
" " Counsellors for the year 1837 to 1838, . . . 31
Officers for 1838, ... 34
Honorary Members and Fellows, June, 1837, to June, 1838, . 37
Proceedings of the Society, 1839, ... 39
" " Counsellors, 1838 to 1839, ... 43
Officers for 1839, ... 49
Honorary Members and Fellows, June, 1838, to June, 1839, . 60
Proceedings of the Society, 1840, ... 63
" " Counsellors, 1839 to 1840, ... 67
Officers of the Society, 1840, ... 92
Officers of District Societies, ... 93
Proceedings of the Society, 1841, ... 95
" " Counsellors, 1840 to 1841, ... 102
Fellows admitted, June, 1840, to June, 1841, ... 120
Officers of the Society, 1841, ... 121
Officers of District Societies, ... 122

ARTICLE I.

ON SOME OF THE

DISEASES OF THE KNEE-JOINT.

BY GEORGE HAYWARD, M. D.,
Professor of the Principles of Surgery, and of Clinical Surgery, in Harvard University.

[Delivered before the Society, May 31, 1837.]

MR. PRESIDENT AND GENTLEMEN OF THE SOCIETY:

A PRACTICAL subject seems to be the most suitable for this occasion. The design of the annual discourse is not so much to impart information as to elicit it; and this can be best effected by treating on some obscure point connected with our profession, and thus exciting farther inquiry and observation.

There is not time for a full treatise on any subject; and if there were, I do not feel that I could offer one, that would be either new or instructive to those whom I have the honor to address. But it may be in my power to suggest some topics, that may be thought worthy of farther investigation; and I do not hope to do any thing more than this.

Such, unfortunately, is the condition of the healing art, even at the present day, that there are many points, in all its departments, in which the pathology

is obscure, the diagnosis difficult, and the method of treatment, consequently, uncertain. We look forward, it is true, with confidence, to a better state of things; already, brighter prospects are opening before us, and the philosophical mode of investigation that has recently been adopted in the science of medicine, cannot fail, if judiciously pursued, to lead to the most auspicious results. But the dawn has only commenced, and it will yet be long before the darkness is altogether dissipated. This cannot be accomplished, without the untiring and successive labors of many. The experience of no one man, however extensive it may be, is sufficient for the purpose. There is a duty, then, that devolves on all, from which no one should shrink.

Every one who hears me can, no doubt, call to mind many subjects, both in medicine and in surgery, that are still obscure; and among these, I think, that the diseases of the joints hold a prominent rank. I therefore propose to offer a few remarks on some of the morbid affections of the knee-joint. It will, of course, be in my power to make only a few suggestions on these diseases; but I trust they may lead others to a careful examination of them.

There are many reasons for examining this subject with great care. The joints are often diseased; sometimes as the result of injury, and at others the trouble comes on spontaneously. The frequency of these diseases may be, in part, owing to the exposed situation of some of the joints, rendering them liable to accidents and injuries of various kinds, and subjecting them to inconvenience from changes of tem-

perature. But this cannot account for all of them. The extent and variety of their motions have, no doubt, some influence in the production of many of their morbid affections.

These affections, too, are usually obscure in their nature, and, consequently, difficult to manage. They are frequently insidious in their attack, and often obstinate in their character; producing, sometimes, permanent lameness, and occasionally terminating in loss of limb or life.

From the great degree of obscurity that not unfrequently attends some of these cases, and from the unpleasant manner in which they occasionally terminate, regular practitioners are often led to abandon them altogether, and the patients are consigned to the hands of those, who sometimes have more boldness than skill.

So great is this obscurity, that the same disease, as has been justly remarked, is known under a variety of names, indicating a difference of character; and several diseases of the articulations, differing essentially from each other in some respects, are often confounded under a common name. It is obvious, that under such circumstances, a judicious mode of treatment would not probably be adopted.

At first view, it may seem singular, that this class of diseases is not more readily understood, when we consider, that the situation of most of the joints is such, that we can examine them with great ease, and perceive at once any change in their form or size.

But it should be recollected, on the other hand,

that the joints are complex in their structure, composed of parts which are dissimilar in character, and which are endowed with very different properties. These are the synovial membrane, which lines the capsular ligaments, the articulating cartilages, and the bones. Each of these is, no doubt, oftentimes the seat of disease, while the other parts remain, for a time, wholly unaffected.

It would be an important step toward a better knowledge of the diseases of the joints, if we could decide, in every case, in which of these parts the disease began. This is, by no means, an easy task. Morbid affections of the joints do not cause death at an early period, and opportunities, therefore, are not afforded, of making an examination of the parts at the beginning of the disease, unless the patient should be cut off by some other complaint. These cases have been so rare, or advantage has not been taken of all that have occurred, or, perhaps, from both these causes, it has happened, that there is still much obscurity on the subject. We are not able to determine, in every instance, whether it be the synovial membrane, or the cartilage, or the bone, that is affected. It is, no doubt, true, that all of them may be, and very often are, diseased; but it is highly probable, that the disease begins in one part, and gradually extends to the others.

To Bichat, perhaps, more than to any other individual, belongs the credit of having first brought into practice the method of investigating disease according to the texture which is affected; though we perceive, in the writings of Mr. John Hunter, that

the importance of this mode did not escape his penetrating mind. For its application to the diseases of the joints, we are indebted to Sir Benjamin C. Brodie;* and it may be regarded as the most important step that has ever been taken on the subject. This plan I shall pursue in the remarks that I am about to offer, and shall speak of those diseases of the knee which I propose to notice, as they affect the synovial membrane, the articulating cartilages, and the bones.

1st. *Of inflammation of the synovial membrane.*

The synovial membrane, which forms the lining of the interior of the joints, has a close resemblance to the serous membranes. It differs from them, however, slightly in its functions; its office being to secrete the synovia, a fluid which is similar to serum, but which contains more albumen.

The synovial membrane is the frequent seat of acute inflammation. It arises sometimes from accidents, sometimes from exposure to cold, and occasionally it comes on without any assignable cause.

* This gentleman has done more to advance the knowledge of the diseases of the joints, than any other individual. He first adopted the method of investigating, separately, the affections of the different parts of which the articulations are composed. By this means, he has thrown great light on this obscure subject.

I have availed myself very freely of his suggestions. At the same time, I deem it proper to say, that I have advanced nothing of a practical nature, that is not the result of my own experience; and I am happy to add, that this has, in most instances, fully confirmed what he had before stated. The world is deeply indebted to him for his invaluable labors; and I hardly know a more useful, safe and judicious work, in the whole range of practical surgery, than his "Observations on the Diseases of the Joints."

It is most often met with in those joints that are least protected by the soft parts; and, consequently, it is supposed, that changes of temperature have no small degree of influence in its production. It varies very much in intensity. In severe cases, it is attended with great pain at its commencement, and the general system is much affected, the appetite being impaired or altogether lost, the secretions diminished, and the circulating system highly excited. It is most common in adults, and rarely occurs spontaneously in young children.

When the whole or the greater part of the synovial membrane is inflamed from the beginning of the attack, the pain is felt throughout the joint, and swelling comes on almost immediately. But when the inflammation is confined, at the onset, as it often is, to one part of the membrane, the pain is also limited to that spot, but extends with the disease, which usually involves the whole articulation. In this case, the swelling is not discoverable at first.

There is something peculiar about the swelling. The whole joint is not swollen in the beginning; the enlargement is perceptible only in certain parts, as it arises, in the early stages, from an increased secretion of synovia, which distends the ligaments. It is, consequently, most apparent on the anterior and lower part of the thigh, under the extensor muscles, and on each side of the ligament of the patella. At this period, a fluctuation can usually be perceived; but if the disease continues, the ligaments become so much thickened by the deposition of fibrin, that it cannot be detected, and the form of the swelling is also changed.

If the inflammation be severe, the integuments are discolored at an early period; but it is no unusual thing, to see this discoloration limited to a part of the joint, and not extending over the whole of it, till the disease has continued for some days. In fact, I have seen some cases, and those not of a very mild character, in which there was only a slight redness on a circumscribed spot during the whole course of the affection. The color is somewhat peculiar, resembling the blush of red that is seen in the beginning of erysipelatous inflammation.

There are various modes in which acute inflammation of the synovial membrane may be said to terminate; or perhaps it would be more correct to say, that there are various processes set up during its progress. These are increased secretion of synovia; deposition of fibrin, producing a thickening of the ligaments, and occasionally loose flakes of fibrin are thrown out in the cavity of the joint; suppuration and ulceration of the synovial membrane. These, of course, do not all take place in every instance; the disease is not unfrequently arrested at an early period, and the limb is restored to its former usefulness; the increased quantity of synovia, the only effect of the morbid action, being gradually absorbed. At other times, even when recovery takes place, a great degree of stiffness remains, owing to the thickening of the ligaments. And occasionally, even under the best treatment, pus is secreted in the cavity of the joint, and ulceration of the synovial membrane, in most cases, precedes, accompanies, or follows its formation. When this is the case, the articulating

cartilages are also very apt to ulcerate, and, in a great majority of such cases, amputation is the only means we have of saving the life of the patient.

Perhaps there is no better example of the formidable symptoms which sometimes accompany acute synovial inflammation, than what is occasionally seen as the consequence of a wound through the capsular ligament of the knee-joint. It is, no doubt, true, that this accident often does well, the wound healing readily by the first intention. But it is also true, that a simple incised wound of the knee, which penetrates the joint, will sometimes be followed by the most disastrous consequences. If life and limb are saved, permanent lameness may be the consequence, even though the patient is in good health at the time of the accident. In cases of this kind, suppuration takes place, not only in and about the articulation, but abscesses form at some distance from it, both on the thigh and leg. The constitutional symptoms are severe; the pain is excruciating; there is an entire loss of appetite, with great prostration of strength; and hectic fever, with night sweats, comes on at an early period. At such a time, an operation seems to offer the only chance for the life of the patient; and yet, the condition of the soft parts is frequently such as to forbid its performance.

It should, however, be remarked, on the other hand, that, notwithstanding these unfavorable appearances, such cases sometimes ultimately do well. If the system has not been broken down by intemperance or previous disease, there is still hope, that its powers may rally; and amputation, therefore,

should be deferred as long as it can be done with prudence. If recovery takes place, the limb will be stiff for some time, if not permanently; and yet, it occasionally happens, that its powers of motion are by degrees almost entirely restored.

Acute inflammation of the synovial membrane sometimes comes on in consequence of rheumatism, gout, syphilis, or the excessive use of mercury. In either of these cases, it is not so severe, and the pain is less acute, than when it is strictly a local disease, arising spontaneously, or coming on from injury. It also yields more readily, when properly managed.

The *treatment* of acute synovial inflammation is principally local. Though entire rest of the limb is very important, it is hardly necessary to direct it, as motion gives so much pain, that the patient has no disposition to move it.

Topical bleeding and cold lotions are among the most powerful means of preventing suppuration; but if, notwithstanding their use, this takes place, warm poultices and fomentations must be substituted for them. In severe cases, general bloodletting is sometimes necessary; and in every case, purgatives are useful, and a mild, liquid diet, small in quantity, and slightly nutritious, is the best, as well as the most agreeable. Counter-irritation should be used, if the swelling continues after the active inflammation is subdued.

Sometimes, in this affection, all the symptoms are mitigated, but the disease still remains, and assumes a chronic, or perhaps it would be more proper to call

it a sub-acute, form. This form is not unfrequently seen, without having been preceded by severe inflammation, especially in persons of a scrofulous habit, or those who have a taint of syphilis in the system, or are affected by rheumatism, or have taken mercury freely. We often see it, also, in consequence of injuries of the knee, and particularly of those in which the ligaments have been twisted. The suffering, at the time of the accident, is perhaps slight, and the pain usually subsides altogether in a few hours, and rarely continues more than two or three days. Not long after this, the patient finds that the limb easily becomes tired, and that, when he has used much exercise, there is a slight degree of tenderness about the joint, though but little, if any, pain. This does not come on at any precise period after the injury; it sometimes occurs within one week of the accident, and at others, not under six.

The inconvenience is, in most cases, so trifling, for some time, that professional advice is not usually sought at an early period. The swelling is rarely considerable at any time in the course of chronic inflammation of the synovial membrane, unless it be complicated with syphilis, gout, or rheumatism. Under such circumstances, the joint will sometimes be not only more swollen, but also more painful. Whether this be universally true or not, I am unable to say; but I have seen it in several instances, in which sub-acute inflammation of the knee was at first brought on by an injury, and the difficulty kept up and aggravated by one of the diseases just named.

It would seem, then, if this view of the subject

be correct, that where synovial inflammation is modified by syphilis, rheumatism, or gout, it is less severe than the worst species of the acute form of the disease, and more so than that of the chronic. But it may also be added, that when thus modified, it is less likely to terminate in suppuration, and the consequent destruction of the joint.

Much time is required for the successful treatment of this class of morbid affections. The skill of the surgeon is often baffled, by the unwillingness of the patient to submit to the proper remedies; and among these, rest holds a prominent rank. In fact, without it, the other means can do but little.

The lameness is so slight, that the necessary confinement becomes irksome, and yet the least exercise of the limb, or the slightest motion of the joint, in the early stages, is sure to aggravate the difficulty. It is essential then, to insist upon keeping the limb in a state of entire rest at this period.

If there should be any pain, or much tenderness, local bleeding, by leeches or cupping, should be used; the latter is to be preferred, as the blood can in this way be drawn quicker, and it also acts as a counter-irritant. It is usually necessary to resort to bleeding two or three times. This should be followed by the application of blisters, and it will be found, that it is better to let them heal and draw new ones, than to dress them with any irritating application. In this way, they produce more effect on the disease and less disturbance to the system.

At a later period, stimulating applications of various kinds will be beneficial. Among the most important

of these are a mixture of olive oil and sulphuric acid, the tartar emetic ointment, and the ammoniated liniment with the tincture of cantharides. In those cases in which there is reason to think that the patient is affected with scrofula, some preparation of iodine combined with simple cerate may be advantageously employed; either iodine itself, or the hydriodate of soda or potash.

After the disease has been entirely subdued, a great degree of stiffness frequently remains, partly in consequence of want of exercise of the limb, and partly from a thickening of the ligaments. When this is the case, friction and passive motion of the joint should be cautiously tried, but they should be immediately discontinued, if they produce any pain. They may excite inflammation, and the formation of pus, and thus destroy the joint. I have seen cases of this kind, in which amputation became necessary to save the life of the patient. It is true, that by bending the joint powerfully, and rubbing with great freedom, its motions may sometimes be sooner restored, and no bad consequences follow. But it is very certain, that it is a course that is always attended with danger, and one which a skilful and judicious surgeon would never adopt. Moderate and long continued friction should be employed, where any is proper; but it should never be used until the disease is subdued, and it may then aid in removing its effects.

The warm spout bath is also a valuable remedy in giving strength to the limb; it must, however, be used with the same precautions as friction, not to be employed, till the inflammation is gone, and to be laid aside, if it causes any pain.

2d. *Morbid change of structure of the synovial membrane.*

The synovial membrane sometimes undergoes a change of structure of a peculiar character, which is not found to take place in any other part of the body. In fact, it is rarely if ever met with, except in the knee-joint. It consists of a deposition upon the membrane, and an alteration in its organization. This deposition is a pulpy, gelatinous mass, varying from the twelfth of an inch, to an inch in thickness, in which may be seen white membranous lines. It is sometimes of a light gray color, and at others, of a reddish brown.

It is but recently, that we have had any accurate description of this disease, and for our first knowledge of it, we are indebted to Mr. Brodie. Before his time, it was confounded with affections that differed from it in many important particulars.

It attacks children about the age of puberty, more than any other persons, and rarely affects those who have passed the middle age of life. Scrofulous patients are the most disposed to it. Injuries of the joint, and repeated attacks of inflammation, are thought to be among its exciting causes.

Its first symptoms are swelling and stiffness, without pain. It usually begins in one part of the membrane, and gradually extends to the others, till the whole becomes affected. It is, for a long time, attended with but little inconvenience, and there is no change of color in the integuments. The motions of the joint become, by degrees, more limited, and sometimes are altogether destroyed. The swelling

increases, but its form is less regular than that which arises from synovial inflammation. It is also soft and elastic, and on a superficial examination, it may be thought to contain fluid, but on a more careful one, it will be discovered, that there is no fluctuation.

The joint will sometimes remain stiff and swollen for many months, or even years, giving little or no pain to the patient; and, in some few instances, absorption of the effused matter takes place to a very considerable extent, and the limb is, in a great measure, restored to its original condition, a slight degree of stiffness and swelling only remaining. But this is a rare occurrence. It more often happens, after the disease has continued for some time, that inflammation takes place, attended with pain, though the pain is rarely of a very acute and distressing character. The general health, however, is soon affected; abscesses form in the joint, the articulating cartilages ulcerate, and the ends of the bone become carious. The removal of the limb offers the only chance of saving life; in fact, the operation is often necessary, before the disease has gone so far.

This has been the case, in all the instances that I have seen, and even amputation has not always been sufficient to save the patients. Though they may recover from the effects of the operation, they frequently die very soon after, from disease of some of the internal organs, the lungs, more often than any others.

It must be obvious, then, that this is a constitutional disease, and the mode of treatment should be influenced by this consideration. Great attention

should be paid to the diet, which should be mild and nutritious, and to the state of the bowels. Exercise in the open air is important, if it can be taken without moving the limb. In fact, all those means are proper, which are calculated to invigorate the system.

Our local remedies should be such as are likely to prevent the occurrence of inflammation, and if this comes on, those should be employed, which have a tendency to check it. It must, however, be regarded as a disease of a very formidable character; and though it may for a long time remain quiescent, yet when it takes on the inflammatory state, we have but little, if any power, of controlling it. It is true, that there are some authors who do not regard the disease as so incurable as it is generally thought to be, and Mr. Scott has recommended pressure, with great confidence. This, however, has not succeeded in the hands of others; it has excited inflammation and pain, and thus hastened the progress of the complaint.

M. Lisfranc has, more recently, spoken highly of the advantage of moxa, and believes it to be capable of arresting, if not curing, the disease. Though it no doubt deserves to be tried, I should not feel very sanguine of a favorable issue.

Entire rest of the limb, with counter-irritation over the whole swollen surface, seems sometimes to check its progress. From its affinity to scrofula, iodine, in some of its forms, would be perhaps the best counter-irritant. Friction and motion of the joint can be of no advantage, at any period of the complaint, and may hasten the result which it is our object to prevent.

3d. *Of ulceration of the cartilages.*

The articular cartilages have but a small degree of vascularity. They are, consequently, little liable to disease, but, from the same cause, they are slow to recover when they once become affected.

It has even been doubted by some, whether they are furnished with any vessels; and that peculiar condition in which they are sometimes found, and which is usually regarded as ulceration, has been thought to be a mere mechanical abrasion; their supposed want of vascularity, rendering it impossible for them to be the seat of inflammation.

But the mere fact, that they are capable of growing, as we know they do, with the other parts of the body, renders it certain that they are supplied with blood vessels. A higher degree of organization than they possess would unfit them for the office they are designed to perform; they would readily inflame and suppurate, if they had a greater degree of sensibility and vascularity.

Even as it is, they sometimes become diseased, and ulceration follows. When this process takes place in the soft parts, it is always attended with the secretion of pus, but this is rarely the case when it occurs in the articular cartilages.

The cartilages of the joints may ulcerate, in consequence of a disease of the synovial membrane, or of an affection of the bones, or the cartilages themselves may be the primary seat of the disease. This latter affection, which must be regarded as the true ulceration of the articular cartilages, most often occurs in adults. Individuals, who have been affected

with rheumatism or scrofula, are the most frequent subjects of it. It is attended with but little swelling at any time, unless it be complicated with synovial inflammation; and the joint is rarely, if ever, swollen, at the commencement of the disease. The pain is deep-seated and gnawing, and much increased by pressing the articular cartilages against each other. It is felt before any swelling can be discovered. It is usually referred to one spot, and is more severe at night, than at any other time. In the beginning of the disease, it is very slight, and always relieved by rest, and aggravated by motion. It increases, however, in intensity, as the morbid affection advances, until it becomes very severe, and, in a few weeks from its commencement, a slight swelling may be discovered. This swelling takes place between the bones, and is supposed to be owing to the thickening of the cellular membrane, in consequence of the disease that is going on within the joint.

In some cases, the constitution suffers so much, though the limb is but slightly altered in appearance, that amputation is necessary. If the joint be opened, after the limb is removed, it will probably be found, that the cartilage is ulcerated only to a small extent, without any other morbid appearance, or, at most, there will be, in addition, a small quantity of pus.

In other cases, an abscess is the consequence of this disease. This is followed by an ulceration of the ligaments, and also requires an operation. There is another class of cases, too, in which, after the morbid affection has continued some time, a restorative

process is set up, and a partial recovery takes place. When the cartilage has been destroyed by ulceration, it is never restored, its powers of vitality are so feeble; but when the disease that has been going on in it has been arrested, the ends of the bone frequently unite either in partial or complete anchylosis; that is, either by ligament or bone. The joint, of course, is either partially or wholly stiff, and its motions, consequently, limited to a greater or less extent. But when the disease has not advanced so far, and recovery takes place, though the cartilages have been ulcerated, the limb is often restored almost to its original usefulness.

It is apparent, from what has been said, that this is a formidable disease, and remedies, unfortunately, have not the control over it, that could be wished. In its treatment, great attention should be paid to the general health, by regulating the bowels, and by strict attention to diet. As motion produces so much pain, the joint should be kept entirely at rest; and in order to insure this, the limb should be confined in a hollow splint, extending from the foot to the nates; or, in some other mode, that will entirely preclude all possibility of motion. So important is absolute rest, that some surgeons have relied upon it alone, in the management of the early stages of some of these cases, and have not unfrequently been completely successful.

Bloodletting, either general or local, is rarely required. But if there be reason to believe, that the joint is inflamed from too much motion, or any other cause, topical bleeding will be useful. It seems to

have no power, however, of arresting the ulcerative process, but only the inflammation, which is, as it were, accidentally superadded to it.

Our principal reliance must be in some form of counter-irritation. In mild cases, blisters, kept open by stimulating dressings, may be sufficient, but in more severe ones, resort must be had to issues, moxa, or the actual cautery. Which of these is to be preferred, and in what cases a preference is to be given to one over the others, it is, perhaps, not easy to decide. Issues, made by caustic potash, or other chemical agents, were, till recently, in most general use. Within a few years, however, moxa and the actual cautery have been again brought into practice; for both of these remedies were in high favor, among the ancients, for diseases of the joints.

The moxa and the actual cautery are probably the best counter-irritants, as they certainly are the most powerful. The former I have used, but not the latter, principally from an apprehension, that it might be difficult to limit its effects. My own experience has taught me, even when issues are to be made about the knee-joint, to be cautious in the selection of the spot upon which they are to be placed. I once saw an abscess produced within the joint, which rendered amputation necessary, by the application of caustic directly over the capsular ligament.

Whatever, therefore, be the agent that is employed, it is safest to apply it at some distance from the articulation, otherwise a degree of inflammation might be excited in the synovial membrane, that would

essentially retard recovery, if it did not altogether prevent it.

It seems to be well established, that the benefit derived from issues is not in proportion to the amount of suppuration which they produce, but is probably more owing to the powerful impression which they make on the part. Admitting the correctness of this opinion, there can hardly be a doubt, that moxa and the actual cautery should be preferred to common issues, in cases of this kind, especially in adults; in children, the milder means may answer.

When the disease has been arrested, the stiffness may sometimes be lessened by gentle friction, passive motion, and the tepid spout bath. These should all be tried cautiously, otherwise they may excite an undue degree of inflammation.

4th. *Of the disease of the articulating surfaces of the bones of the knee-joint.*

The ends of the bones are sometimes the primary seat of disease. It begins in the cancellous structure, which becomes more vascular, and contains a less proportion of earthy matter than in health. Persons predisposed to scrofula are the most frequent subjects of it, though they are by no means the only ones who are affected by it; and hence it is often called the scrofulous disease of the bones.

It most usually attacks children, and it is rarely met with after adult age. It often comes on in an

insidious manner; a slight pain being occasionally felt in the joint, especially after exercise; and this state of things may continue for some length of time, before any swelling can be perceived. It is frequently attributed to injuries, though their influence in its production has probably been very much overrated. Changes of temperature, and exposure to cold and moisture, have a much greater agency.

When young children are the subjects of it, appearances of disease can usually be detected in other parts of the body; but when the patients have passed the age of puberty, the diseased joint is often the only affected part. After the joint begins to swell, it is not unusual, to find some of the inguinal glands enlarged. The pain, however, continues trifling, and does not become severe, till matter forms within the capsular ligament.

As the joint increases in size,—which it steadily does, though it is sometimes very slow in its progress,—exercise becomes painful, and the patient, with a view of favoring the limb as much as possible, keeps the knee bent, and brings the toes only to the ground in walking. In this way, a permanent state of semi-flexion is produced; and it is a position which is found more comfortable than any other.

The swelling is distinguished by puffiness and elasticity; and though it attains an enormous size, the integuments covering it remain of their natural color. When the tumor is very large, purple veins are seen passing over it, owing, no doubt, to the

interruption of the venous circulation. The swelling, however, seems to be larger than it actually is, in consequence of the emaciation of the limb above and below it.

After the disease has continued for some length of time in the bone, it extends to all the neighboring parts; the cellular and synovial membranes become thickened and diseased, the cartilages ulcerate, and an abscess, perhaps, forms in the joint. When the pus is discharged, either by a natural or artificial opening, a new suppuration may take place, and hectic fever terminate the life of the patient, unless it be saved by an operation. But even this is not always effectual; the system may have received so severe a shock from the disease, that it is unable to rally, and its powers sink under it.

But, on the other hand, it sometimes happens, that, after the pus has been discharged, no new abscess forms; the wound slowly heals, and the morbid action seems to be altogether arrested. But though the patient recovers in this case, the limb is rarely, if ever, restored to its former usefulness. The bones having been carious, and the cartilages ulcerated, the joint is stiff, in a greater or less degree. In some instances, a solid osseous union takes place between the ends of the bones, forming a true anchylosis.

Sometimes, the joint will continue enormously enlarged for many years, without the formation of an abscess. When this is the case, the general health is occasionally so much affected as to require

the removal of the limb; at other times, the system seems to participate but little in the local trouble. It is well ascertained, that, though the bones seem to be swollen, from an early period of the disease, they are, in fact, not enlarged at any time during its progress. If a joint be examined, after its removal, it will be found, that all the parts are in a state of disease, and that the bone is softened to a very considerable extent. It seems, also, to be well settled, that, though the bone is more vascular than in health in the early stages of this affection, it becomes less so in the latter ones; and hence, why the bone, at this period, is so prone to die and exfoliate.

The treatment of this distressing affection must vary somewhat in different cases, though it should not be active in any. The general health should receive our principal attention; and it is doubtful, whether local means have the power of arresting or checking, to any extent, the complaint. The limb must be kept at rest, as motion is sure to aggravate the disease.

Local bleeding should only be used on the occurrence of active inflammation, and then the application of leeches may afford some relief. From the known affinity of this disease of the joint to scrofula, we should not be led to think, that bloodletting could have any favorable influence over it; and experience has fully established the correctness of this opinion.

Counter-irritation, which was formerly so much

employed in this complaint, is now almost wholly laid aside. It is not thought to have any power of preventing suppuration; though blisters are still sometimes used in the chronic form of the disease, merely with the view of retarding its increase in size.

Cold applications are among the best means to be used, when the part is inflamed; if it becomes painful, fomentations should be employed, and mild poultices, when pus is secreted. The abscess should be allowed to open spontaneously; otherwise, an undue degree of inflammation will sometimes come on.

At this advanced period of the disease, an operation is usually required; but if recovery takes place, the limb will, in most cases, be stiff, and anchylosis cannot be accomplished, unless it be kept entirely at rest. Friction and passive motion cannot be safely used at any time.

I have thus noticed four important diseases of the knee-joint, which, though they differ from each other in their nature, symptoms, and method of treatment, are often confounded under the common name of white-swelling. This term was first introduced into surgery by Wiseman, more than a hundred and fifty years ago, and was probably intended to indicate that disease of the bones that has just been noticed. It, by degrees, however, embraced other diseases, until it included all those chronic swellings of the joints, in which there was no discoloration of the skin, and which often terminated in the loss of the

limb or the life of the patient. Though surgeons did not, till recently, know the exact difference in these morbid affections, they soon discovered, that they were not precisely the same; and they therefore made a division of white-swellings,—a very loose and inaccurate one, to be sure,—into the rheumatic and the scrofulous.

It is not, however, so singular, as at first view it may seem to be, that diseases, differing from each other as much as those do of which I have just spoken, should be confounded under a common name. There is a close resemblance in their morbid appearances, when they have advanced to that stage that the removal of the limb is necessary to preserve the life of the patient. In each of them, we find, at this period, that the synovial membrane is thickened, and oftentimes changed in structure, the cartilages ulcerated, the bones carious, and not unfrequently a collection of pus in the cavity of the joint. But, though the mistake might easily be made, it is not the less important to avoid it, as the same treatment is not adapted to all of them. They can be discriminated by careful attention to the diagnostic marks of each; and, though I may not have described them clearly, they nevertheless have a real existence. It was my intention, to trace only the prominent features of these diseases, in the hope of calling your attention to an obscure but important subject, and one which has too long been consigned to unmerited neglect. If I shall be fortunate enough to do this, my purpose will be answered.

Permit me, in conclusion, Mr. President, to congratulate you, and the Fellows of this Society, on the auspicious circumstances under which we have assembled. This institution has been incorporated almost sixty years; and, since its reorganization, in 1803, it has steadily advanced in prosperity and usefulness. Its members have increased from thirty, —which was the whole number at its establishment, —to almost six hundred; and we may indulge the hope, that, before the return of another anniversary, it will find in its ranks every well-educated physician in this Commonwealth.

It was founded for the purpose of raising the standard of medical education, of elevating the profession, and of guarding the public against the arts of the ignorant and designing. It has no sinister purposes to accomplish, and seeks no other aggrandizement than what it gains by increasing the acquirements and respectability of its members. It is capable of exerting a salutary influence on the community and on the profession; and if it fail to do this, it will be because we do not keep in view the objects for which it was established. It may, for a time, be misrepresented and misunderstood; but if the members are true to themselves, and to the great objects for which it was founded, the benefits which it confers on the public will be felt and acknowledged by all. Let us cling, then, with affection, to our time-honored Society, and, by acting up to its principles, we shall make it an instrument of good to our fellow-men, and a means of advancing the dignity and honor of our profession.

While there are many agreeable associations connected with this occasion, it cannot fail, also, to bring with it feelings of a melancholy character. Every year takes from us some of our number; and that which has just drawn to a close has called to their final account several esteemed and respected members of our Society.*

Some of them had passed long lives with an honorable reputation; and, after having devoted themselves faithfully to the interests of humanity, were gathered in a ripe old age, "full of years and full of honors."

Others were in the vigor of manhood, rich in experience, active, faithful and intelligent, diligently exerting the powers of their minds, and diffusing their stores of knowledge for the benefit of their fellow-men. In the midst of their usefulness, they were summoned, by an inscrutable providence, at a moment when their lives seemed to be of the most value to the world. And others, again, were called

---

* The following Fellows of the Society have died since the publication of the last Annual Discourse, viz.:

Sylvanus Plympton, M. D.,	Woburn,	Æt. 79.
Daniel Brigham, M. D.,	Marlborough,	" 77.
Nehemiah Cleaveland, M. D.,	Topsfield,	" 76.
Hon. Oliver Fiske, M. D.,	Worcester,	" 74.
Richard Hazeltine, M. D.,	Lynn,	" 62.
Joseph Lovell, M. D.,	Washington City,	" 48.
Oren Wright, M. D.,	Pittsfield,	" 46.
John Lummus, M. D.,	Lynn,	" 46.
Anson Bates, M. D.,	Barre,	
Thomas G. Lee, M. D.,	Charlestown,	" 28.
John H. Manning, M. D.,	Ipswich,	" 24.

away when they were just entering on the great theatre of life, young and ardent, full of hope and promise; and thus were blasted, in a moment, the fond expectations of anxious friends. While we lament their loss, let us gratefully cherish their bright example and honorable name.

ARTICLE II.

OBSERVATIONS ON THE INFLUENCE OF STAGNATED WATER AND AIR UPON HEALTH.

BY DANIEL OSGOOD, M. D.,
HONORARY MEMBER OF THE SOCIETY.

EVERY well-ascertained fact, relative to what may be conducive of health or disease, by which the stock of knowledge becomes increased, may be made useful to the art of medicine.

Amongst the external influences capable of affecting the health, is the condition of the water and air, with respect to their being in motion or at rest, in places where the subjects reside. These fluid compounds, when prevented from circulation, and subjected to a certain degree of atmospherical heat, are liable to be decomposed; and their products have proved no less prejudicial to health, than have those from accumulated putrifying animal and vegetable substances.

Cautions, sufficiently numerous, are on record, in

regard to the latter; whereas, attention has but too seldom been directed to such as arise from stagnated water and air, free from any more than the ordinary admixture of dead organized matters. To serve as a manifestation of the importance of this consideration, the following exposition, in relation to it, of certain changes that have been made in Havana, and their effects on the health of its inhabitants, is offered.

It may be reverted to, though known, that the city, and the bay on its windward side, are surrounded, excepting on the seaboard, by somewhat high land; that the city is but little higher than the surface of the water, and is enclosed by a wall; and that the wind generally prevails, in this as in other tropical places, from the eastward. The wall, on every side, until latterly, was so close and high as to impede the free current of air into the streets; a long expanse of shoal water lay near to the wall on the bay side, the still surface of which was exposed to the heated air of the obstructed atmosphere; and the streets were kept in such a bad state of repair, that, although they are on a slight declivity towards the bay, much water was always left remaining stagnant in their broken places and hollows, after the frequent rains. Whilst thus circumstanced, the strangers in the city and the confined parts of the harbor were always exposed to be attacked by a violent, inflammatory kind of fever; and the other inhabitants were likewise subject to attacks of a similar, but more moderate disease. Recently, a great part of the wall, on the windward side of the

city, has been demolished; and a fence of iron rails now stands in its place. The shoal water, near to the outside of the new fence, is covered by a lengthened wharf, extending along the whole of the commercial shore of the harbor; and the streets are drained and macadamized. These improvements have prevented such abundant exhalations, as were formerly produced, from taking place; and during the progress of the alterations thus made, fewer and fewer cases of the fever, heretofore so much dreaded, have arisen. The cases since observed, have taken place only on board of the particular vessels that lie near to the high land at the windward of the harbor, and such others as, being in ballast and neglected, have their holds left unventilated, and foul with bilge water; or in the still confined and damp parts of the city. Consequently, the disease may be, for the most part, very easily avoided; and, in future, Havana will probably come to be as much renowned for the salubrity, as it has been for the mildness, of its climate.

These limited observations are respectfully submitted to the attention of the Society, with the hope, that some of its learned members will deduce from them, and other facts in their own possession, such speculative and practical inferences as may be applicable to the present subject.

Havana, Oct. 30, 1836.

ARTICLE III.

HISTORICAL SKETCH
OF THE
ORIGIN AND PROGRESS
OF THE
MASSACHUSETTS MEDICAL SOCIETY.

By EBENEZER ALDEN, M. D.,
Fellow of the Society.

[Read at the Annual Meeting, May 30, 1838.]

Mr. President and Gentlemen:

We are assembled in circumstances of peculiar interest. Since the last annual meeting, sixty-five gentlemen have accepted the fellowship of the Society. At no former period have accessions been so numerous; nor has a more commendable zeal among the members ever been manifested to advance the interests of the profession. With two schools of medicine, favorably situated to give instruction to students resident in every part of the Commonwealth; —with a General Hospital and Asylum for the Insane, and a State Lunatic Asylum, models among similar institutions, and each a monument to the enlightened enterprise of the government, and to the philanthropy of their respective founders;—with numerous local establishments, public and private,

for the relief of the various forms of disease to which humanity is incident;—with a weekly press devoted to medical intelligence;—above all, with a spirit of wakeful inquiry among the members of the profession, and with such a state of harmony, as excludes the pursuit of selfish, sordid interests; it may safely be affirmed, that the prospects of usefulness to those who practise the healing art, and of the rapid advancement of medicine, as a science, were never so flattering in this Commonwealth, as at the present time.

We have reason for special congratulation, also, that the last obstacle in the way of the honorable admission to our Society of every respectable member of the profession in the community, was happily removed by a vote of the last year, which conferred the same privileges and immunities on graduates of the Berkshire Medical Institution, as had previously been enjoyed by medical graduates of Harvard University and by our own licentiates. This object had been earnestly, but ineffectually, sought from the first establishment of the western school. Although the most implicit confidence was reposed in the fidelity and thorough instruction of the present incumbents of the several professorships, still it was the opinion of the majority of the Society, that in consequence of a material defect in the charter of that Institution, there was no sufficient guaranty, that unworthy applicants would be uniformly excluded from participating in its honors by those who should succeed them. In other countries, not to say in our own, medi-

cal degrees have sometimes been conferred on persons possessing very inadequate qualifications for the discharge of the responsible duties of the profession. The Society, therefore, charged as it is by the laws of the Commonwealth, with the duty of prescribing "such a course of medical and surgical instruction, and such qualifications, as they shall judge requisite for candidates for the practice of physic or surgery,"* felt it to be an incumbent obligation, to guard the avenues to the profession, and to avoid any course which, however desirable on some accounts, would be liable, if pursued, to be misconstrued into a dangerous precedent, and thus eventually to defeat one of the main purposes of its organization. By an act of the Legislature, passed April 1, 1837, these difficulties were removed by the appointment of an independent Board of Overseers, invested with similar powers and authority in relation to the Berkshire Medical Institution, as belong to the Overseers of Harvard University, with respect to the medical department of that college: and the Society lost no time in responding, in a manner alike honorable to themselves and to the Institution in question. The resolution, unanimously and cordially adopted on that occasion, is adapted to promote and to perpetuate harmony among the members of the profession, scattered, as they are, over a wide extent of territory, and thus greatly to increase the facilities for accelerating the progress of medical science.

The benefits of medical association are not yet

* Revised Statutes, Chap. 22, Sect. 1.

fully appreciated by the public, and perhaps not to their full extent, by the members of the profession. It is only when the energies of man are concentrated and united with those of his fellow-man, that he is able to accomplish most in a worthy cause. If the progress of medicine during the last half century has been rapid in this vicinity beyond any former parallel, this result has been produced chiefly by more cordial efforts among its professors to effect it during that period than before; and, if in time to come, medical science is to advance in correspondence with other departments of literature,—union, a free interchange of opinions and earnest cooperation, alone will achieve it.

It is a great mistake, to suppose that the benefits of medical association are limited, or even chiefly important, to the medical profession. There are duties which every practitioner owes to the individuals who seek his advice and confide in his skill; for the faithful performance of these, he alone is responsible. There are other duties, of a public nature, which belong to the profession in their associate, rather than in their individual, capacity. With reference to these the Massachusetts Medical Society was originally constituted. In granting a charter, obligations were imposed, as well as privileges conferred. Have the ends of the institution been attained? and have the reasonable expectations of the Legislature and of the public been realized? This inquiry is supposed to be peculiarly appropriate at the present time, and to this your attention is now respectfully invited. In

prosecuting it, it is proposed to present a sketch of *the origin and progress of the Society*, so far as may be necessary in exhibiting some of the leading objects of its organization, and the practical influence that has resulted from the course of measures which have been adopted in securing them.

In all communities individuals may be found, who seem unable to appreciate the value of an object which promises no peculiar advantage to themselves. It is not strange, that such persons should be reluctant to admit that other individuals may be influenced by motives which transcend the limits of their own consciousness and experience. Hence association has been, not unfrequently, considered, as only another name for monopoly; and prejudice, if not hostility, has been awakened against the most philanthropic efforts and the most valuable public institutions. The principal design of the present investigation is, to show that the objects to which the Society has directed its attention are of great public utility; and that whatever of patronage or of reputation it has attained, has been fairly earned and worthily bestowed. One fact, it is believed, will be evident, in the progress of these remarks, and it cannot fail of being duly appreciated by members of the profession not yet associated, and by the public; whenever the Society has at any time petitioned the Legislature for an alteration of their charter, it has not been for the purpose of securing exclusive privileges to the members, but rather that they might diffuse the benefits of medical association more extensively in the community.

MEDICAL EDUCATION.

A leading object under the charter, and one to which the Society has ever devoted the most assiduous attention, is, to elevate and to fix, on a permanent basis, the standard of medical education: in other words, to provide a succession of well-educated physicians and surgeons, adequate to the wants of the community.

To appreciate what has been done in the prosecution of this object, it must be recollected, that from the settlement of the country in 1620 to the time when the Society was organized in 1781, a period of more than 160 years, no systematic effort whatever had been made in New England to raise the standard of medical education, or to regulate the practice of medicine. A few able and highly respectable physicians, educated chiefly in foreign countries, were to be found in the larger towns; but in general, the profession was in a state of extreme degradation. The process of induction, in numerous instances, was something like the following;—A young man, who, from choice, ill health, or aversion to other pursuits, was desirous of being initiated into the "arts and mysteries" of healing the sick, commenced operations by pursuing the Latin Grammar, under the direction of the parish minister, as far as the first personal pronoun: he next apprenticed himself for a few months, more or less, as suited his fancy or convenience, to some neighboring practitioner; and with this slight preparation, entered upon

the discharge of his responsible duties. No examination was had, nor was any license given or required. In some cases, a certificate was proffered by the instructer to the pupil at the expiration of his apprenticeship, but even this ceremony was often dispensed with. A skeleton, in those days, was a rare acquisition, and a human dissection created as much consternation among the people, as the appearance of a meteor. If the body of a malefactor was occasionally obtained for dissection, very little use was made of it, except boiling it in some obscure place for the sake of preserving the bones. Up to the close of the last century, Cheselden's compendium, with the small plates connected with the octavo edition, was the only text-book of anatomy used by many physicians in educating their pupils; and it was gravely contended, that a knowledge of anatomy was of little importance to a physician, whatever might be the case with respect to the practice of surgery. "Medical libraries had no existence" (in this country), and the few eminent men who had been educated abroad, demanded from students a compensation (often one hundred guineas), which far surpassed the means of those who expected to practise for ninepence the visit. In the metropolis, one shilling and sixpence, and afterwards two shillings, was the customary fee for an ordinary visit, until during the time of a general depreciation of the currency towards the close of the revolutionary war, an association of physicians who were accustomed to hold their meetings at the Green Dragon

tavern, and were sometimes denominated the Green Dragon Club, raised it to three shillings. Up to the period of the formation of the Society, no public attempt has been made in New England to communicate medical instruction, if we except a course of lectures by Dr. William Hunter, an eminent physician and surgeon in Newport, R. I., in 1754, and the two succeeding years, and a short course of anatomical demonstrations in Boston, by Dr. John Warren, in the winter of 1780.

As an anatomist, Dr. Warren was self-taught, but it should be added, he was well taught. His talents as a lecturer were of the highest order of excellence. He possessed a happy faculty of communicating to others the results of his own original investigations, and of infusing his spirit into every subject which claimed his attention. His enunciation was rapid, yet distinct; his voice clear and musical, and of sufficient compass to be heard without effort in any part of a large assembly. His manner was deeply impressive; and with all the lights of modern science, it is rare to find an individual equally able, at his pleasure, to enchain the attention, and carry away the feelings of an audience.

To this gentleman, and a few others of a kindred spirit, the Society is indebted for its origin. In the progress of the arduous struggle for independence, the want of a competent number of well-qualified physicians and surgeons was severely felt. The Hon. Samuel Holten, an enterprising physician in Salem village, now Danvers, took a noble and de-

cided part in behalf of his country, and early relinquished private practice, that he might more effectually subserve her interests. He was a member of the provincial Congress at Watertown, where he was a member of a Medical Board for the examination of candidates for the departments of medicine and surgery in the army. In 1777, he was one of the delegates from Massachusetts, who assisted in framing the confederation of the United States; in 1778, a member of Congress, and one of the original signers of the Constitution. For more than a year, being the only medical gentleman in Congress, "to him chiefly was committed the charge of the medical department of the army."* Such a man, in such circumstances, would not fail to perceive the indispensable necessity of adopting some efficient measures for the promotion of medical education.

Dr. Warren, as his biographer* informs us, relinquished his business at Salem, immediately after the memorable battle of Bunker hill, and, guided on his way by the blaze of Charlestown, reported himself at head quarters. In the ardor of his patriotism, he appeared with his gun and knapsack, prepared to enter the ranks as a common soldier. Other destinies, however, awaited him. He was immediately appointed a hospital surgeon, in which capacity he followed the fortunes of the army until 1777, when he was stationed in Boston, as superintendent of the military hospitals; an office which he continued to

* Dr. Thatcher's Medical Biography, art. Holten.
† James Jackson, M. D.

hold, with honor to himself, and advantage to his country, until the peace of 1783.

And is it possible, that a Society, originated by such men, is a monopoly? Is it an institution for the benefit of the few, with little regard to the public interests? Were Holten and Warren influenced by sordid motives;—men, who voluntarily relinquished lucrative employments and the joys of home, that they might aid in securing an honorable independence for their country? With them were associated the venerable Holyoke, Baylies, Tufts, Rand, Lloyd, Danforth, Dexter and others, who, if they were not all equally distinguished as patriots, were many of them possessed of wealth, at the head of the profession, and devoted to its interests. To exclude merit, or to degrade the profession of their choice, was no part of their design. Having just emerged from physical vassalage, they were desirous of uniting with eminent men of other callings, in establishing the empire of mind, and, through this instrumentality, to assist in laying the foundations of the future prosperity of their country, broad and deep, on the basis of intelligence and virtue.

On the first of November, 1781, the Society was incorporated; and on the twenty-eighth day of the same month, the charter having been accepted, it was duly organized, by the election of officers, pro tempore, and by the appointment of a committee to draft a code of by-laws. Under these laws, a Board of Censors was chosen, for the examination and license of such candidates as might apply, and the

form of a diploma was agreed on, to be given to those who should be found worthy of the honor. In 1789, the Legislature, by a special act, empowered and required the Society to describe and point out, from time to time, such a course of medical instruction or education, as they should judge requisite for candidates for the practice of physic and surgery, previous to their examination before them, and cause the same to be published. The censors were under oath to the faithful performance of their duty, and any neglect subjected them to a heavy fine.

The immediate consequence of these measures was, that more time than formerly was occupied by students in qualifying themselves for the profession; all who were enterprising, and could possibly defray the expense, sought instruction by attending the medical lectures annually given at Harvard College; new and improved text-books for the use of students were adopted, and a class of young physicians was gradually introduced to business, far better qualified to perform the duties of the profession than those who had preceded them.

The medical department of Harvard University was organized the next year after the incorporation of the Society, and chiefly through the influence of the same individuals. At one period, however, no little collision existed between the Faculty of the College, and the Fellows of the Society, on the subject of conferring medical degrees; nor did it subside, until, by mutual conference and explanations, the Society obtained satisfactory assurances that the

standard of medical education would not be lowered. Then graduates were freely admitted to all the privileges of licentiates examined by its own censors, and the two corporations have since moved forward on terms of reciprocity and good fellowship.

It is a reproach not unfrequently cast on our profession, that few comparatively of its members have availed themselves of the advantages of a public education before engaging in studies strictly medical. In a new country, just struggling into existence, many obstacles prevent young men from pursuing a course exceedingly desirable in itself, which neither their time nor their pecuniary circumstances will permit them to follow; obstacles which cannot be fully appreciated in later times, nor in countries where instruction in every science is abundant, and within reach of all who are desirous of obtaining it. The reproach, however, such as it is, cannot well be attached to our Society. As early as April, 1793, at a special meeting, it was voted that "the Society earnestly recommend a University education to all designed for the medical profession; and to all students in physic an attendance on the medical lectures in the various branches, as taught in the Universities; and as most of the French authors upon physic and surgery have written in their own language, and many of them are very valuable, the Society also recommend a knowledge of that language.

The qualifications required of those who are admitted to practice, under the auspices of the Society,

are "sound mind and good moral character," a collegiate education, or a competent acquaintance with such departments of it as are supposed to hold a special relation to medical pursuits; a three years' course of medical study, under the direction of competent instructers, and a satisfactory examination in all the prescribed branches. And the Society does not receive the diploma of any institution, as evidence of medical qualifications for practice, unless these requisites have been substantially complied with; nor do the Fellows lawfully consult with, aid, or abet those who commence business with less qualifications, or who fail to produce evidence that they possess them.

In consequence of the unwavering adherence of the Society to its original principles of insisting on a thorough and uniform system of education, to entitle any gentleman to be acknowledged as a member of the profession in good standing, and by the honorable cooperation of the medical colleges of the State in the same general views, the standard of medical education has been constantly advancing, not only in this Commonwealth, but throughout New England; and no further action, on the part of the Society, appears to be called for at present, than a strict conformity to the rules already adopted.

Some gentlemen have complained that the rule of the Society, demanding a fee of medical graduates, educated out of the State, on receiving license, while none is required of graduates from the medical colleges within the State, is invidious. The subject was

brought to the notice of the Counsellors, by the Worcester District Society, at their statute meeting in February last, and it was voted to recommend to the Society to rescind the rule. I am happy to add, that, at the present meeting, the recommendation has been promptly complied with; so that no conceivable obstacle remains to the admission of every competent practitioner of medicine or surgery in the State, to fellowship and an honorable standing, aside from his own voluntary neglect seasonably to present his testimonials.

That some such system was necessary, to secure to the community a succession of well-educated and competent physicians, is manifest. On such a subject, the medical colleges in New England could scarcely be expected to act in concert, and if they should do it, they have no authority to prevent private individuals from thrusting upon the community half-educated pupils. Indeed, the necessity is imperious of a chartered institution, acting under the authority of the State, through the agency of which, as is well expressed in the act of incorporation, "a just discrimination may be made between such as are duly educated and properly qualified for the duties of their profession, and those who ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered, or perhaps lost to the community."

PROGRESS OF MEDICAL SCIENCE.

Another leading object, in the organization of the Massachusetts Medical Society, is, " to increase the stock of medical knowledge, and to render the profession more and more useful to the public."

In the prosecution of this object, the following measures were adopted at a special meeting held for the purpose at an early period, and the principles involved in them have been steadily pursued to the present time.

1. Every Fellow was requested to transmit to the Recording Secretary an account of the diseases most prevalent in his circle of practice, from one stated meeting to another.

2. A correspondence was opened with other bodies, devoted to similar pursuits, in this and foreign countries.

3. A committee was appointed in every county in the Commonwealth, to correspond with respectable physicians and medical associations within their limits respectively, and request the communication of all extraordinary and important cases.

4. Such communications were, if approved, read at the stated meetings, or at extra meetings held for the purpose, and afterwards numbered and filed.

5. From these, the most interesting papers were selected for publication, after due revision by a committee.

6. A committee was appointed to devise ways and means for the further diffusion of medical know-

ledge through the several counties of the Commonwealth.

During the first ten years, the operations of the Society were conducted with vigor. Communications from the Fellows were numerous, so that extraordinary meetings were frequently held for the purpose of considering them. Particular inquiries were instituted, as to the state of the medical profession in the various parts of the Commonwealth, and the most distinguished physicians were elected to the extent which the charter permitted. The venerable Dr. Holyoke, in particular, annually transmitted an account of the diseases of Salem, together with a bill of mortality, state of the weather, &c., besides valuable papers on other subjects. In 1790, the first number of the Society's Communications was published, amounting to 128 octavo pages. It contained the act of incorporation, several original papers on medical subjects, together with an appendix, communicating a variety of interesting extracts from foreign publications. In the introduction, the principal objects of the Society are briefly stated, and the intimate relation which exists between medical association and the progress of medical science is distinctly noticed. The number of Fellows at that time amounted to sixty-seven, and of honorary members to twelve.

During the next ten years, the communications were frequent, and many of them at the time of great value, but the publication was not resumed. Towards the close of that period, unhappy personal

alienations among some of the leading members existed; several of the most active of the founders had deceased or had become too infirm to take part as formerly in the meetings, and the Society languished. From 1794 to 1800, the Treasurer was directed not to call on the Fellows for the payment of their annual assessments.

In the original act of incorporation, it was provided, that the number of members resident in this Commonwealth should be limited to seventy. This provision might have been highly expedient in the infancy of the institution; but, after an experiment of twenty years, it became evident, that the most successful accomplishment of the great objects for which the Society was organized, would be more certainly attained by its repeal. The distinction of physicians into various orders and grades, of an arbitrary character, does not comport with the nature of our institutions, nor is it adapted to promote that harmonious action, which is essential to the most rapid improvement of medical science.

At a special meeting, held in January, 1803, a committee was appointed to take into consideration the state of the Society, and to report such alterations in the institution, as they might judge expedient to be adopted. The result of this measure was an application to the Legislature for an extension of the charter, and in March following, an act was passed, which placed the Society on the liberal and extended basis which it occupies at the present time. A new code of by-laws was

formed; committees were appointed in every county, to report the names of such gentlemen, resident within their limits respectively, as should be thought worthy and desirous of membership; and accessions were numerous and highly respectable. And here it is worthy of particular notice, that the Society did not ask for its Fellows new powers or privileges, but only to be permitted to share those they possessed with the whole body of the worthy members of the profession in the Commonwealth. Surely, in this movement, there is no manifestation of a spirit of monopoly.

DISTRICT SOCIETIES.

To obviate the inconvenience, if not impracticability, of frequent meetings; to promote harmony and to encourage a spirit of inquiry among the members in their respective circles, and to extend, as widely as possible, the benefits of medical intercourse, provision was made, in the act of 1803, that on the application of any five members, the Counsellors may establish, within such districts and portions of this Commonwealth as they shall think expedient, subordinate societies and meetings, to consist of the Fellows of the corporation residing within such districts respectively. They may also appoint censors within such districts, who shall be authorized and empowered to examine and license such candidates for the practice of physic and surgery, as shall present themselves for examination and be approved by a

majority of the censors. The members of such district societies are enjoined to communicate such cases, as may be selected for their importance or utility, and have authority to make their own by-laws, not inconsistent with the regulations of the general Society, to elect their own officers, and to purchase and receive by donation books, philosophical or surgical instruments, or other personal property, and to hold and dispose of the same, exclusive of any authority of the general Society.

Petitions were presented, at an early period, from members in Suffolk, Essex, Worcester, Berkshire, Hampshire, and some other districts, which were granted.

Some of the district societies, formed in consequence of these applications, particularly that in Essex county, went immediately into active operation, and have been highly useful. In other cases, it does not appear that any organization took place after authority was granted. Perhaps no measure could be adopted at the present time, better adapted to promote the progress of medicine, than some plan by which the Fellows, residing within a convenient distance, should be brought together for medical intercourse every month. The usefulness of such associations would be greatly increased by the establishment of libraries in each, embracing a selection from the most valuable medical periodicals of the day, and other works of standard value.

The Society for Medical Improvement in the City of Boston, is an honor to the State. Although of

recent origin, its cabinet contains a rich depository of morbid anatomy, and is constantly accumulating, under the supervision of its judicious managers.

ANNUAL DISSERTATION.

In 1803, a resolution was passed, that a dissertation should be read at the annual meeting, by some member previously appointed. In 1804, that duty was performed by Dr. Rand, senior, and the dissertation was published. In 1806, Dr. Warren presented an interesting view of the mercurial practice in fevers. At that time he declined giving a copy for the press. Some years after, however, it was communicated to the Society in the form of an elaborate treatise, and may be found in the second volume of their Communications.

This measure has proved acceptable to the Society, and has been continued to the present time. [Note A.]

PUBLICATIONS.

In 1806, after an interval of more than sixteen years, the Society resumed its publications. They have now reached to five volumes, of about 500 pages each, and one part of a sixth volume. They consist chiefly of the dissertations delivered at the annual meetings, communications from the Fellows on various topics of interest, and reports of committees. For some years past, the proceedings of the Coun-

sellors and of the Society have been published annually, and distributed to the Fellows.

To awaken interest and elicit communications, in the year 1829, it was voted to offer a premium of one dollar per page, for such communications as should be judged worthy of publication. Several interesting papers were received in consequence of this vote, and were published under the auspices of a committee appointed for that purpose. It may be proper here to add, that since the year 1812, more than twenty volumes of the New England and of the Boston Medical and Surgical Journal have been published; a work, which, although it was undertaken and carried forward by individual enterprise, has from the beginning, been under the editorial supervision of members of the Society, and has been chiefly sustained by them, although open to communications from all respectable sources, and widely circulated beyond the limits of the Commonwealth.

LIBRARY.

In adopting measures for the advancement and diffusion of medical science, great care has been taken by the Counsellors and by the Society, to suggest and employ those only, which were adapted to prove equally beneficial to all the members, in whatever part of the Commonwealth. For this reason, the Library, although valuable, has not been acquired by purchase, but wholly through the generosity of members, and of other public-spirited individuals.

The late Hon. John Brooks, of Medford, and Dr. Francis Vergnies, of Newburyport, each bequeathed to the Society their valuable libraries of medical books. There is a provision in the by-laws, that these books may be loaned to the district societies on application, so that all the members, however remotely situated from the metropolis, may enjoy the benefit of perusing them. It is to be regretted that applications for them are not more numerous. It was an excellent remark of the late Dr. Rush, that the mind of a medical man should always be "in an absorbing state." Observation, without reading, is liable to become superficial; and, when a physician ceases to be a student, instead of doing any thing to promote the advancement of medical science, he degrades himself to the condition of a mere "routiner."

LIBRARY OF PRACTICAL MEDICINE.

Another method recently adopted for the diffusion of medical information, has been the publication of a series of volumes of valuable works, foreign and domestic, under the title of Library of Practical Medicine. This publication was commenced in 1831, and thus far has proved eminently successful. In its bearings and influences, it is worth more to the Fellows, individually and collectively, than the annual assessment twice told. There is an advantage in having the attention of the whole profession simultaneously directed to a particular topic of interest; it is

peculiarly grateful to Fellows who have made some sacrifice to attend the annual meeting, to take with them, on their return, a medical book of sterling value. The importance of this measure can be best appreciated by members of the profession, living remote from medical intercourse and the sources of knowledge, to whom a new work on medicine is a luxury, and one in which their slender means allow them only an occasional indulgence. The invaluable Researches of Louis are to be found in the hands of every member of the Society, unless through gross, personal inattention; and the knowledge of the labors of the French pathologists is not, as formerly, confined to a few gentlemen resident in the cities and larger towns, but is widely diffused through the whole body of the profession. In consequence of this, a spirit of active inquiry and of cautious investigation has been awakened; numerous dissections have confirmed the observations of Louis and his coadjutors, on the subjects of Typhus and Phthisis, and the foundations for future improvement are being laid, broad and deep, on the basis of pathological anatomy and exact analysis.

I am not insensible, that some individuals affect to think and to speak lightly of the labors of the French school, as if they were all expended on diagnosis. It is even said, that they manifest a greater solicitude to confirm a previous opinion by a post mortem examination, than to cure the patient by appropriate remedies; in a word, that the remedial measures they adopt, are either inefficient or expectant.

These objections will have little weight with those who investigate and think for themselves. We may assuredly avail ourselves of the labors of others in acquiring a knowledge of disease, without a sacrifice of our own superior modes of treatment, if indeed they are superior. It is worth the inquiry however, whether, if a more exact method were observed in noticing the effects of remedies, some modes of treatment, now popular, might not fall into disuse, and more successful ones be substituted in their stead. [Note B.]

PHARMACOPŒIA.

At different periods, the Society has expended no small amount of labor to secure a uniform mode of compounding medicines, and to protect the community against the dangers incurred by the use of such as are spurious. At a meeting of the Counsellors, Oct. 3, 1805, a committee was appointed to draw up and lay before them a Pharmacopœia or Formulary, for the preparation of compound medicines, with names affixed to the same, to be called the Massachusetts Pharmacopœia. Drs. Jackson, and J. C. Warren, made a statement of the progress of the committee, in February, 1806, and again in the following June. It was then voted, that fifty dollars should be placed at their disposal, for the purchase of such books as might be needed in the prosecution of the work, and an advertisement was inserted in the public papers requesting members of the profes-

sion to furnish such formulæ, as they might judge useful to be introduced. The pharmacopœia was completed, under the direction of the gentlemen above named, and laid before the Counsellors, in June, 1807. After having been examined and approved, it was ordered to be printed. This, it is believed, was the first work of the kind ever accomplished in the United States.* It was favorably received, here and elsewhere, and was brought into general use. Its leading objects were, to introduce a systematic nomenclature of medical substances, in conformity with the improvements in modern chemistry; to simplify medical prescriptions, by omitting obsolete and useless formulæ of foreign pharmacopœias; to bring into notice several indigenous articles in common use in some of the larger towns; to produce uniformity in the preparation and administration of medicines; in a word, to act as a convenient manual for the physician and the apothecary; and these objects were happily attained. In the following year, Dr. James Thatcher compiled a dispensatory, on the same general plan and arrangement, the manuscript of which was submitted to the Society, and, after having been revised by a committee of the Counsellors, was published in 1810.

On the 2d day of June, 1818, the Society concurred in the measures proposed for a national pharmacopœia, and appointed delegates to assist in preparing it.

* In 1789, the college of physicians in Philadelphia announced their intention of publishing a pharmacopœia, in a circular, which was sent to the Massachusetts Medical Society, and may be seen on their files.

REPORTS ON EPIDEMICS.

Among the most useful of the publications of the Society, have been the Reports, which have been drawn up and widely circulated, during the prevalence of epidemic diseases.

In May, 1798, Dr. Jenner published his Inquiry into the Causes and Effects of the Vaccine Virus, with Cases illustrative of its prophylactic powers, as a Preventive of Small Pox. This work was favorably noticed in Dr. Duncan's Annals, of the same year, and excited great attention not only in England, but also on the continent, and in this country. Early in 1799, vaccine matter was collected, and vaccination was extensively practised in England; and in the spring of 1800 was introduced into Paris, from matter furnished by the London Vaccine Institution.

In July, 1800, Dr. Waterhouse commenced vaccination in this country, with matter obtained from Bristol, England. Soon after, a supply was obtained by Drs. Manning, Jackson, and others. The Medical Society made application in January following, and received fresh virus from the London Institution, and through the agency of its members vaccination was generally introduced, as a public benefit, rather than as a source of emolument to individuals. From that period to the present, no labor nor expense has been spared, by the Counsellors and Fellows, to diffuse the benefits of this noble discovery, and to prevent it from being brought into disrepute by the use of spurious matter, or by an imperfect introduction of

such as is genuine. If the population of the State, at the present time, is but imperfectly protected against the ravages of small pox,—and that this is the case recent painful facts fully attest,—the fault does not lie with the medical profession, certainly not with this Society. As early as June, 1808, an elaborate report of a committee of the Counsellors was presented and read at the annual meeting, and was afterwards published for the benefit of the community. This report was an able one, and the positions of its distinguished author have most of them stood the test of time, and are now received as settled principles. The protective power of vaccination has been attested by an experience of more than forty years. Millions of persons, through its influence, have been preserved from death or disfiguration by one of the most painful and loathsome of human maladies.

In the last report of the national vaccine establishment, in England, signed by the presidents of the colleges of physicians and surgeons respectively, it is stated, "that of more than 70,000 persons vaccinated in descent, with successive portions of matter originally collected by Dr. Jenner, thirty-eight years ago, vaccination has manifested its peculiar influence in all; and that of this number, some hundreds have been subjected to the severest trials, by exposure to small pox in its most fatal form."

Of what avail, however, is a remedy, if it be not applied at all, or applied too late? It is well known that certain eruptive diseases, and probably some

others, render the body insusceptible for the time of an effectual vaccination. It is, therefore, important, —perhaps it should be said essential,—to the public safety, that the operation should be entrusted to none but skilful hands. This is the more necessary since the repeal of former laws, which made it incumbent upon the municipal authorities to remove those persons, who were laboring under small pox, to hospitals remote from human dwellings. The law itself was of little use, and in some cases positively injurious, inasmuch as it induced persons to rely upon it for protection, to the neglect of vaccination, the only adequate remedy. The repeal, therefore, was expedient and highly proper, and had the full sanction of the Society; nevertheless, the public should understand that there is no place in the community safe from the ravages of the small pox, and no protection against its dangers, except by a general vaccination, under the inspection of persons competent to conduct it in a suitable manner.

SPOTTED FEVER.

In March, 1806, a disease of a peculiarly fatal character appeared at Medfield, in this State, a description of which, by Drs. Danielson and Mann, was published in the second volume of the Society's Communications. In succeeding years, it extended in various directions. In 1810, it broke out with great violence in Worcester county, and was present simultaneously in not less than sixteen towns. In

March of that year, the Counsellors, at a special meeting, appointed a committee to investigate the causes, history and mode of treatment of the disease, which was familiarly known as the "petechial" or "spotted fever." In performing this duty, a circular was addressed to every Fellow of the Society, and to other reputable physicians in whose vicinity it had prevailed, requesting such information as they might be able to communicate in relation to it. Letters in reply were received from twelve gentlemen, all Fellows of the Society, and an able report, extending to 128 pages, was prepared, published and distributed, at the expense of the Society.

This report presented a history of the disease, an account of its symptoms in different years and localities, together with suggestions as to the appropriate treatment, and was at the time a document of great value. Before the appearance of this pamphlet, the treatment had been in many places empirical, and of course, in those instances, prejudicial. Active stimulants, opium, brandy and steaming, were too often indiscriminately used, and it was the opinion of intelligent and cautious observers, that not a few of the individuals attacked died of the remedies, rather than of the disease. After a full and careful investigation, it turned out, as might have been anticipated, that the disease was a highly congestive form of fever, varying exceedingly in its type, in different places and seasons, and requiring, like other forms of fever, an eclectic rather than a specific mode of treatment.

SPASMODIC CHOLERA.

The doings of the Society, before and during the prevalence of the epidemic cholera in this country, in 1832, are too recent to require an extended notice. At the February meeting of the Counsellors in that year, the following preamble and resolves were adopted, viz.:

"Whereas the disease, called the Epidemic or Spasmodic Cholera, has prevailed in various parts of Asia and Europe, and may hereafter appear on this side of the Atlantic Ocean, so that it is expedient that the physicians of this country should be prepared to meet this disease; therefore,

"*Resolved*, I. That a committee of seven be chosen by the Counsellors of this Society, whose duty it shall be to investigate the history of this disease, and especially the best mode of treating it; and carefully and without prejudice to consider whether it be or be not a contagious disease.

"II. That the sum of thirty dollars be appropriated to defray any such expenses for the purchase of books, as may be thought necessary by the committee.

"III. That this committee be authorized to make public the result of their deliberations, at the expense of this Society, at any period they may think most conducive to the public good."

In May following, the Report, a volume of 190 pages, was put to press. By awakening public attention, and causing the necessary precautions to be

taken before the onset of the disease in this country, this publication was instrumental in preventing the panic which would otherwise have been produced, and the number of deaths was comparatively few, and chiefly among a class of persons, whom no dangers can deter from yielding themselves willing victims to depraved passions and appetites.

It is perhaps proper to add, that most, if not all the reports which have been referred to, are understood to have been drawn up by the same individual,* a gentleman to whose indefatigable industry and entire devotion to the interests of the profession, more than to any other person, the Society owes its prosperity, and the high and honorable standing it has attained.

In presenting even a sketch of the operations of the Society, it appeared necessary to allude to the foregoing facts, in order to repel the unjust imputation, that they have always been of a character adapted to promote the interests of the profession, rather than those of the community. The truth is, the Society has never declined to engage in any enterprise of public utility, appropriate to its organization, because it would involve labor, sacrifice or expense on the part of its members. If further proof were wanting, it would be only necessary to allude to a recent vote, offering a premium of five hundred dollars for discovering a successful mode of rearing leeches having a foreign origin.

---

* James Jackson, M. D.

LEGALIZING THE STUDY OF ANATOMY.

Perhaps the importance of medical association to the public good cannot be better illustrated, than by referring to the success which has crowned the labors of the Society in its efforts to secure the legalizing of the study of anatomy. It was the remark of an eminent statesman, that most great conceptions are simple. The passage of a law, legalizing anatomy, is apparently an affair of very small importance; yet, in its remote influences, it is adapted to lengthen the mean term of human life, and to relieve an untold amount of human suffering. It is only about thirty years, since it was seriously doubted whether a limb could be preserved, provided the principal artery should be tied, and few surgeons, comparatively, could be found bold enough to venture upon the operation. And yet, it is a very simple operation, is attended with but little hazard, and requires but a moderate share of skill in its performance, for a person well acquainted with the anatomy of the parts. Hundreds of persons also in this country, no doubt, have died from strangulated hernia, who might have been saved by the timely performance of an operation by no means difficult.

At a meeting of the Counsellors, in February, 1829, a proposition was introduced, that a committee should be appointed to prepare a petition to the Legislature, asking for a modification of the laws then existing, which prohibited the procuring of subjects for anatomical examination, and report the same to the

Society for consideration at the annual meeting. The proposition was sustained. At the annual meeting in June following, the committee reported, that they had prepared a petition to the Legislature, as directed by the Counsellors; but as the subject was beset with difficulties, and of vast importance to the community; and as time and effort would be required to prepare the public mind for so great a change as was contemplated, they recommended the appointment of a large committee, to whom the whole subject should be referred, with instructions to consider what measures it would be expedient to adopt, and to report to the Counsellors in October following. The committee issued a circular to the Fellows on the subject, and the Counsellors, at their meeting in October, appropriated one hundred and fifty dollars for its distribution, not only to the Fellows, but to other intelligent and influential individuals. Subsequently, a large edition of the Report was widely circulated, and a petition was presented to the Legislature. In June following, the subject was favorably noticed by the Governor, in his opening message to the Legislature, and the petition was referred to a committee, who, after a patient hearing, reported favorably. The Report was an able document, and does honor to the head and the heart of the chairman, the late J. B. Davis, Esq., as well as of the other members associated with him. The result was, that on the 28th day of February, 1831, an act was passed, legalizing the study of anatomy in this Commonwealth; "an act which has brought honor on our State, as the first

to set an example of such enlightened legislation;" which has done much in this and other States to remove unfounded prejudices against anatomical inquiries, and no doubt has saved many valuable lives.

SUPPRESSION OF QUACKERY.

The Legislature has, in an important sense, constituted the members of the Massachusetts Medical Society guardians of the public health. In granting a charter, it was contemplated that something would be effected towards the suppression of quackery, or, as it is expressed in the act of incorporation, "to prevent the administration of medicines by ignorant and wicked persons."

The task imposed on the Society, in relation to this subject, is a difficult one. When a regular physician speaks against empirics or their appliances, many persons suppose that he is actuated by mercenary motives; not reflecting, or perhaps ignorant of the fact, that a large item in his business, as things now are, consists of an effort to relieve sufferings produced by patent medicines and the use of nostrums. The power the Society exerts, on this subject, is a moral power. They can present motives, but cannot insure their success. They can indicate the path of safety, but have no authority to coerce men to walk in it. And this is as it should be. If any will persist in violating the laws of the human constitution, after having been duly warned of the danger of such a course, there is no power on earth

that can prevent the infliction of the penalty which nature has provided, in the shape of physical suffering. Some years since, "the Legislature enacted that irregular practitioners should not be permitted to collect their fees by aid of the law;" but this provision was not sought for by the Society; on the contrary, it was in consequence of a representation made by members of that body, that it was repealed, on a revision of the statutes in 1835.

The measures that have been adopted for the suppression of empiricism, have been, 1st, To establish and maintain a sufficient standard of medical education. 2d, To make public all useful discoveries in medicine, to the extent of their ability, particularly in relation to prevalent epidemics and unusual diseases. 3d, To exclude from their fellowship irregular practitioners of every grade, and maintain among the members a system of correct professional conduct.

Empiricism is the offspring of ignorance, or wickedness, or of both. The legitimate method of counteracting its influence is, to diffuse, as widely as possible in the community, a knowledge of the structure, functions and laws of the human body. The first principles of anatomy and physiology should constitute an important part, not only of a classical, but also of a common school education. Such works as Paxton's Illustrations of Paley's Natural Theology, and the more recent and excellent manual of Physiology, by the late Corresponding Secretary of this Society,*

* George Hayward, M. D., Professor in Harvard University.

which have already been introduced into several of our best academies and seminaries of instruction, are adapted to do more for the suppression of quackery, than volumes of denunciation and the most severe acts of prohibitory legislation. When public opinion shall become so far enlightened, that the conductors of the periodical press shall refuse to furnish a mouth-piece, through which the venders of secret medicines may trumpet their falsehoods; when respectable apothecaries shall cease to become panders and factors for those whom they know to be practising the most gross imposition on the public credulity, the lives of multitudes, now annually sacrificed on the altar of charlatanism, will be preserved, and millions of money, worse than lost, saved to an unsuspecting and outraged community. Every person, in placing his signature beneath a recommendation of a secret medicine, should feel, that in so doing, he may be signing the death warrant of some member of his species; the vender is an accessory to the crime before the fact, and the administrator, however unwittingly, the executioner. It is no palliation of this offence, that death is not always the immediate result. The tendency of a line of conduct is the rule by which we decide on the expediency of pursuing it, and every member of the profession, now present, will bear witness, that he has been frequently called to prescribe for diseases, in their nature curable, which have passed the period of recovery, under the use of inert or injurious secret medicines.

To a person feeling himself indisposed, no more

salutary advice than this can be given:—Abstain from the usual quantity of food; rest awhile from your ordinary pursuits; take, if you judge it expedient, some simple medicine, with the properties of which you are acquainted; and, if relief is not speedily obtained, decide on one of two things: either call a physician well skilled in his profession, and implicitly follow his prescriptions, or trust to the powers of nature alone. Few constitutions can sustain the shock of disease and nostrums at the same time.

Unfortunately, one of the effects of disease is, to weaken the mind, as well as the body. This is peculiarly the case in nervous affections. Hence, persons devoted to literary pursuits, and in other respects of highly cultivated intellects, are liable, in a state of disease, to be carried away by the professions of boasting empirics, and transfer their confidence where it will be abused to their own ruin, and the destruction of their fellow-men. On this principle, we account for the disgraceful fact, that gentlemen of education, clergymen even, have, in some instances, lent their names to be attached to useless nostrums, which have been spread from one extremity of the land to the other. Still more rarely, a physician is to be found, indiscreet enough to recommend a secret medicine, ordinarily, to be sure, with a proviso, that from his knowledge of its composition, he deems it safe and useful. If so, then let the formula for its preparation be published, for the benefit of the world. It is morally wrong, for a medical man to sanction by his name the use of an

article the composition of which is concealed. This principle has been seldom infringed in this Commonwealth; I wish it were in my power to add, *never* by a member of this Society.

OBJECTS OF PHILANTHROPY.

The interest, which the medical profession has manifested in several great objects of philanthropy, has done much to promote those objects, and through them the public happiness. Members of the profession, and of this Society, contributed not influence only, but funds, towards the establishment of the medical schools connected with Harvard University and Williams College. Our noble hospitals owe their existence to their efforts, although philanthropists out of the profession have contributed largely to their endowment and support. The Asylum for the Blind, and the Institution for the treatment of the diseases of the Eye and Ear in this city, may be traced to a similar influence.

The reform with respect to the use of intoxicating drinks as a beverage, so honorable to our country and so beneficial to man, if it did not originate with the medical profession, has found among its members able and efficient advocates. Nor has the Society, in its associate capacity, been inactive in promoting this reform. At the annual meeting in 1827, resolutions were adopted, expressing, in unequivocal terms, the views of the members as to the deleterious influence of these liquors, and their determination to

discourage their use, and to use their skill in ascertaining the best modes of preventing the evils they occasion. At the same meeting, a premium of fifty dollars was offered for the best dissertation on the subject, which was afterwards awarded to William Sweetser, M. D., and the dissertation read at an annual meeting, and published at the Society's expense. The reform was further promoted, by the well-known declaration of seventy-five physicians in Boston, and by the publication of similar views of many respectable members of the profession, resident in other parts of the Commonwealth.

The only additional benefit of our medical association, to which I have time to allude, is, its moral influence in promoting harmony and kind feeling among the members. It is now comparatively a rare occurrence, to find a well-educated physician and Fellow of this Society, who cherishes a hostile spirit towards other gentlemen of a similar character in his vicinity. "Live and let live," is a maxim more uniformly recognised by the fraternity than heretofore; and its increasing influence is to be traced chiefly to the intercourse which grows out of medical organization. Indeed, the sentiment is becoming universal, that it is unwise to degrade a liberal profession in the estimation of the public, by alienation among the members.

It has been objected to our Society, that we waste a portion of our funds in public entertainments. It is true we dine together on the day of the annual meeting; and it would be a sad mistake, to labor

during the whole year to promote the public health, and on the only occasion when, as a body, we are permitted to suspend our labors, to hold a public fast. But seriously, the public dinner is a bond of union to our Society. Whatever collisions may arise, in the private intercourse of individual members, they are banished from the social board. There we meet as brethren, and the cordial greetings of the occasion are as really important to our prosperity, as they are grateful to our feelings.

I have thus presented an outline of the objects of this Society and of the measures which have been adopted in prosecuting them. It has been shown, that the conditions of membership are such only as are essential to enable it to attain those objects. Its by-laws and rules of police embrace only great principles essential to its prosperity. Its benefits are equally diffused, as far as the nature of the case admits, throughout the Commonwealth. As the design of its organization contemplates a union on terms of equality of the whole body of the worthy members of the medical profession in the State, so it is hoped all such will be disposed to accept its fellowship, and aid in promoting its usefulness. The whole number of Fellows admitted, since the organization of the Society, is nine hundred and nineteen.* Of these, two hundred and forty are deceased; removed from the State, fifty-one. The whole number of physicians in the State, as nearly as can be ascertained, is

* In these numbers are not included those who were Fellows of the Society at the time of the separation of Maine, and lived in that State.

about eight hundred and fifty. The present number of Fellows living within the State is six hundred and twenty-eight, of whom sixty-two have *retired*, leaving five hundred and sixty-six acting members.

During the last year, the following deaths occurred among the Fellows. It is remarkable that, with one exception, they were all gentlemen far advanced in life, who had retired from the active duties of the profession.

NAMES.			ÆT.
Luther Allen,	Sterling,	June, 1837,	64.
David Hunt,	Northampton,	July 8,	64.
Harvey N. Preston,	Plymouth,	July 18,	81.
Isaac Mulliken,	Townsend,	Aug. 18,	80.
Joseph Fiske,	Lexington,	Sep. 22,	85.
Cushing Otis,	Scituate,	Oct.	
Rufus Cowles,	Amherst,	Nov. 29,	69.

Among the honorary members, science mourns the loss of the late Philip Syng Physick, M. D., of Philadelphia, who died on the 15th December, 1837, æt. 70. His name is deeply engraven on the rolls of fame, and his history will long occupy a bright page in the annals of our profession.

It does not become me, nor is it fitting to the occasion, to attempt his eulogy. That duty has been performed by other and abler hands. Nevertheless, as it was my privilege at one period to attend on his instructions, it may not be improper to notice some of the more prominent traits of his character. A favorite pupil of John Hunter, he early acquired a strong predilection for anatomical pursuits. His knowledge of anatomy was accurate and practical.

Although highly esteemed as a physician, in the circle in which he moved, his fame rests chiefly on his surgical skill. He was for a long period esteemed the first surgeon in Philadelphia, and perhaps it would not be too much to say, that for many years he was the first, or equal to the first, in the United States. He was deliberate in forming his judgment; but when his opinion was formed, he did not readily swerve from it. It was a favorite maxim with him, that the perfection of surgery consisted in preserving a patient without resorting to a painful operation. When, however, it became manifest that a sacrifice of life would be involved by abstaining from the ultimate resources of the art, he resorted to them without hesitation. With every preparation previously made, even to the last pin that was to confine his dressings, and with a self-possession never surpassed, and rarely equalled, he proceeded, steadily, calmly, and apparently without emotion, to the performance of his duty. No conversation could divert his attention from the interests of his patient, which for the time absorbed all his feelings. As a teacher, his instructions were plain, practical and lucid. As a friend, although somewhat reserved, his feelings were sincere, ardent and uniform. In a good old age he was gathered to his fathers,—ripe and full of honors, and has left an example of devotion to the interests of the profession, worthy of universal imitation.

NOTES.

NOTE A. [*Page* 52.]

List of Authors of the Annual Dissertations, their Subjects, and the years in which they were delivered.

Isaac Rand, M. D. On Phthisis Pulmonalis, and the use of the warm bath, ... 1804

John Warren, M. D. On the Mercurial Practice in Febrile Diseases, ... 1805

Joshua Fisher, M. D. On several Narcotic Vegetable Substances, ... 1806

Thomas Welsh, M. D. On Heat and Cold, as agents on the human body, ... 1807

Hon. John Brooks, M. D. On Pneumonic Inflammation, ... 1808

Aaron Dexter, M. D. On the use of Blisters in diseases of the articulations, ... 1809

Josiah Bartlett, M. D. On the Progress of Medical Science in Massachusetts, ... 1810

Hon. Oliver Fiske. On certain Epidemics which have prevailed in the county of Worcester, . . . 1811

Dr. Abraham Haskell. On Cynanche Trachealis, . 1812
Oliver Prescott, M. D. On the natural history and medicinal effects of Secale Cornutum, or Ergot, . 1813
Richard Hazeltine, M. D. On Phlegmasia Dolens, 1816
Hector Orr, M. D. On the properties of Animal and Vegetable Life, ... 1817
James Jackson, M. D. On Fever, ... 1818
Nathaniel Bradstreet, M. D. On the Proximate Cause of Fever, ... 1820
John C. Warren, M. D. A Comparative View of the Sensorial and Nervous Systems in man and animals, 1820
John G. Coffin, M. D. On Medical Education and on the Medical Profession, ... 1822
Henry W. Childs, M. D. On the Progress of Medical Science in this State, ... 1823
Robert Thaxter, M. D. On the Excessive Use of Ardent Spirits, ... 1824
Joseph H. Flint, M. D. On the Prophylactic Management of Infancy and early Childhood, . . 1826
Nathaniel Miller, M. D. On the Manner of detecting deep-seated Matter, ... 1827
George C. Shattuck, M. D. On the Uncertainty of the Healing Art, ... 1828
William Sweetser, M. D. A Dissertation on Intemperance, to which was awarded the premium offered by the Massachusetts Medical Society in May, 1829, 1829
Rufus Wyman, M. D. On Mental Philosophy, as connected with Mental Disease, ... 1830
Walter Channing, M. D. On Irritable Uterus, . 1833
Zadok Howe, M. D. On Quackery, . . . 1834

Jacob Bigelow, M. D. On Self-limited Diseases, . 1835
Andrew Nichols, M. D. On Irritation of the Nerves, 1836
George Hayward, M. D. On some of the Diseases of the Knee-joint, ... 1837
Ebenezer Alden, M. D. Historical Sketch of the Massachusetts Medical Society, ... 1838

NOTE B. [*Page* 56.]

LIBRARY OF PRACTICAL MEDICINE.

The following works have been already published:

Vol. 1.—A Treatise on Fever. By Southwood Smith, M. D., Physician to the London Fever Hospital.
—Clinical Illustrations of Fever. By A. Tweedie, M. D.

Vol. 2.—Principles of Surgery. By John Pearson, F. R. S.
—Surgical Observations on the Constitutional Origin and Treatment of Local Diseases, and on Aneurisms. By John Abernethy, F. R. S.

Vol. 3.—Practical Treatise on Diseases of the Eye. By William Mackenzie.

Vol. 4.—A Dictionary of Practical Medicine. By James Copland, M. D. Part 1.

Vol. 5.—Anatomical, Pathological, and Therapeutic Researches on Gastro-enterite, Putrid, Adynamic Ataxic, or Typhoid Fever. By P. Ch. A. Louis. Translated by Henry I. Bowditch, M. D. Vol. 1.

Vol. 6.— do. do. Vol. 2.

Vol. 7.—Boylston Prize Dissertations for 1836. By Oliver W. Holmes, M. D., Robert W. Haxall, M. D., and Luther V. Bell, M. D. On the question, How far are the external means of exploring the condition of the internal organs to be considered useful and important in medical practice?*

Vol. 8.—Dictionary of Practical Medicine. By James Copland, M. D. Part 2.

---

* This volume was printed and presented to the Society at the expense of one of its distinguished Fellows.

ARTICLE IV.

A REPORT

FOUNDED ON THE CASES OF TYPHOID FEVER, OR THE COMMON CONTINUED FEVER OF NEW-ENGLAND, WHICH OCCURRED IN THE MASSACHUSETTS GENERAL HOSPITAL, FROM THE OPENING OF THAT INSTITUTION, IN SEPTEMBER, 1821, TO THE END OF 1835;

COMMUNICATED TO THE MASSACHUSETTS MEDICAL SOCIETY IN JUNE, 1838,

BY JAMES JACKSON, M. D.,

LATE ATTENDING PHYSICIAN IN THAT HOSPITAL.

INTRODUCTION.

THE report here offered is derived from cases in the Massachusetts General Hospital. They occurred there between September, 1821, when the hospital was first opened, and December 31, 1835. I have stopped at the period last mentioned, because I ceased to attend there, in the autumn, after that time. Before that time, I had always been the attending physician from the first or middle of October till March or April; so that about half the cases were under my care.

It will be seen, that there was not any case of typhoid fever in 1821, one case only in 1822, and five in 1823; so that almost all the cases occured in the subsequent twelve years.

It has long been my wish to make the records of the hospital useful to the cause of science. A publication of cases merely would not answer this purpose; nor would a hasty report, made quarterly, or annually, do much better. To render cases useful, they must be analyzed, and the results accurately stated; nor would much satisfaction be derived from them, if few in number. In this way, M. Louis has rendered the most important services to medical science. It is his numerical method, which I shall attempt to follow in these reports.

It must be observed, however, that in pursuing his method, the first steps are most important. That is, the observations of cases must be accurate, and must be faithfully stated. If this be not done, we shall be led into error, not to truth. How far has this been done in collecting the cases at the Massachusetts General Hospital? I shall endeavor to answer this question honestly, so as to show where those cases may and where they may not be relied on.

Let me premise, that to have made our observations perfect, we ought in every case, first, to have ascertained the previous state of the patient's health; second, to have inquired into the state of all the functions, and to have recorded the results, noting as well what functions were well performed, as what were not; third, to have noted the successive changes in each symptom; and fourth, in examining bodies in the fatal cases, we ought to have noted the state of all the organs, those presenting natural, or healthy appearances, as well as those presenting morbid changes.

It has been the practice at the Massachusetts General Hospital, in the medical department, to note the state of the patient every day, in acute cases, as our records show. It has been our intention to inquire into the state of all the functions in the beginning of each case, and more or less fully from day to day. But we have been willing to diminish the labor of our records, by mentioning only the functions which manifested disease, while oftentimes we made no records of those which appeared healthy. Unless it was certain, however, that this course was uniformly pursued, it is obvious that there must be some uncertainty in any given case, whether something had not been omitted. There is no doubt that our negligences have been so frequent, that our records cannot be entirely relied on, except for what is positively stated. Nor can we say that our inquiries have been sufficiently full originally. We have often failed in learning, and still oftener in stating, the previous histories of our patients. And we have entirely, or generally, neglected to inquire accurately into some points. In the first years we were the most deficient; but we have made our observations with more and more care as we have proceeded. After making these concessions, I venture to add that, perhaps, there are not any observers, who have acted up to the strict letter of the excellent rules, which M. Louis has given us on this subject. I had thought myself careful in the investigation of cases, and in noting every thing essential; and I find that in some points I have been more so than he is; but

on a larger number he has been decidedly the most thorough. This is especially true as to the morbid appearances in fatal cases, previous to 1833. If I have an apology to offer for this, I will not trouble the reader with it; it is the fact only that interests him.

Let the reader be apprized, then, that the materials, from which this report has been drawn, are not represented as perfect. There are, no doubt, inaccuracies in the observations recorded, and there are deficiencies to be lamented. Having conceded thus much, I think proper to add, that as to every thing which is stated positively, there are probably so few inaccuracies, that they need not be regarded in a general calculation.

I proceed now to remark on the particular subjects noticed in the report.

The number of patients, on whose cases this report is founded, is more than three hundred. During the period embraced by the report, the cases varied in number in the different years. In the early years, patients did not resort freely to the hospital; but in the last ten years the number of fever cases bore perhaps a fair proportion to the general prevalence of the disease in the city. If this proportion varied much, it was when the fever was most prevalent, and when, accordingly, the hospital could not receive all who applied for admission.

Besides those reported, there are sixty-five cases on the records, which were regarded as the same disease, or at least suspected to be so, at the time of

admission. Some few cases, originally entered as continued fever, obviously were not so, as appeared from the histories after admission, and these are not included in the doubtful cases. Some had doubtful claims to be regarded as the same; but from the late period of admission, when they had become complicated with secondary diseases, or from the imperfect histories which the records furnish, it is impossible now to decide positively in regard to them; though probably more than half of these might really have been the same disease. There were others, and not very few, where it was impossible to decide even the probable period, at which the disease commenced, and where the details were very imperfectly ascertained, owing to the natural or morbid stupidity of the patients, although there was not any doubt as to the disease. These, however, were placed among the doubtful cases, because they do not admit of any inferences. But these doubtful cases deserve some consideration in calculating the proportion of fatal cases; and under that head they will be referred to.

It may be proper to make a few remarks on the name of the fever, which is the subject of this report. All, who have attended to the subject, are aware how vaguely the term, fever, has been used; and this by medical men, as well as by others. I have always held to the distinction, made by most physicians in my day, between essential, or idiopathic, and secondary, or symptomatic fevers. Among the idiopathic fevers, I have not been able, until within a very few years, to draw very certain

lines of distinction, except those dependent on their type. Nature has drawn a broad line of distinction between intermittent and continued fevers. In regard to remittents, there is not so clear a ground for distinction. These have appeared to me to belong to one or the other of the kinds before mentioned; some being intermittents accompanied by secondary, local affections, which prevented perfect intermissions. These are the formidable remittents of warm climates. Others have seemed to me to be continued fevers, in which the exacerbations were more thoroughly marked than in common cases. All other varieties of idiopathic fever seemed to me to be dependent on the following circumstances, viz., first, the disproportion in the symptoms, which appertain to the disease, and even the entire absence of some of them in many instances. Thus, in some cases the *cerebral* symptoms, or those belonging to the animal system, and the *organic*, or those belonging to the organic system, are in a certain due proportion; those of both descriptions being duly developed, and those of one, or the other kind, predominating at different stages of the disease. In other cases, the cerebral symptoms are almost entirely wanting throughout the disease; while in some they predominate so much, as to throw into the shade, or actually to mask, all other symptoms. Second, the addition of secondary and local affections, no one of which certainly occurs in the greater number of cases of continued fever, explains much of the diversity in cases of this disease.

That a great variety in the phenomena and in the severity of idiopathic fevers may be explained in this way is, I believe, admitted by all.

While holding these views I was not ignorant that physicians of great name, and particularly in France, had endeavored to show that there was an error in calling any fevers idiopathic; that in all cases fever was dependent on a local affection. As one of these physicians, I may mention Dr. Clutterbuck, of London, who labored early in the present century, and with great ingenuity, to show that inflammation of the brain, or of its membranes, was the local affection, on which continued fever, at least, is founded. But his work failed to produce conviction in many minds; certainly in mine. I will here add, that he was admirably answered by Dr. Beddoes, in one of his last and best works, that "on the combination of fever and inflammation."

The work by M. M. Petit and Serres on the entero-mesenteric fever observed at the Hotel Dieu, in Paris, in 1811, 1812, and 1813, arrested my attention, when first published. I was led to believe, however, that the fever they described was peculiar to the time and place. In a review of the work, in 1815, I urged my readers to be more attentive in examining all the organs, and especially those of the abdomen, in fatal cases of fever. But it is easier to give advice than to follow it. Had I pursued this course, undoubtedly, I should have found that we were seeing every year the disease described by these French physicians.

The work of M. Louis, on continued, or typhoid fever, is now, I trust, well known in this country. It was not till the year 1833, that it received from me the attention it merited. Since it has been known to me, I have found that the continued fever, which is so well known to us in this city, at least, was the same as that which he has described. The symptoms are essentially the same, and the appearances discovered in the body, after death, are precisely the same. These appearances had been noticed here before, when the examination was so made as to disclose them. From 1833, our fever has been the same it formerly was, and *in every case*, where an examination has been made, the morbid changes have been found to be the same as described by M. Louis. In neighboring places, a similar confirmation of the identity of the disease has been furnished from different sources. I may refer here, particularly, to cases, which occurred in Lowell, and were reported by Dr. Bartlett, the learned professor of pathological anatomy, in the Berkshire Medical Institute.

M. Louis did not show, nor did he attempt to show, that the disease he described was dependent on the morbid affection of the small intestines. But he did furnish the means of deciding unequivocally, the anatomical characters of the disease, so that it might be distinguished in other places. Thus he laid the foundation for making further distinctions, if continued fever was not the same in all places. It was almost in vain to look back to descriptions of

fevers previously written. It was for those only, who fully understood the present state of the question, and who were well acquainted with the observations of M. Louis, on both the living and dead body, to prosecute the inquiry.

Viewing the subject in this light, I had a great desire to get observations properly made on the fevers of warm climates. It was, therefore, very grateful to me to receive, in 1835, the observations made by Dr. Gerhard, of Philadelphia, a pupil of Louis, on cases of what has been called bilious remittent fever. These observations were very limited in number; but, so far as they went, they showed clearly, that this disease differed essentially from our continued fever. Since that time, the same gentleman has done still more to settle the question before us. In 1837, he has described the disease, which he calls typhus, and which, in many respects, resembles our fever; but which he clearly shows to differ from it, both in its symptoms, in their course and order, and in its anatomical characters. Meanwhile, M. Lombard, a physician of Geneva, and also a pupil of Louis, being on a visit to Great Britain and Ireland, has described the fever he saw in Dublin, principally, but also in England, and has shown that that also differed from the typhoid fever described by Louis. It would seem, indeed, that the disease, described by M. Lombard, is the same as that witnessed in Philadelphia by Dr. Gerhard.

It is not my intention to prosecute this subject any farther; nor is it important for my purpose to

inquire, whether others have made the same, or any other observations on the subject under consideration. It is plain, that there are, at least, two species of continued fever, both in Europe and this country; and further researches may very possibly show more.

A necessity now arises for distinguishing these diseases by some proper names.

In former years, I have avoided the distinguishing names applied to continued fevers, for two reasons. First, such distinctions between them, as those of synochus, synocha, and typhus, were not shown to exist in nature, and were in truth grounded on men's fancies; and, second, those names were originally significant, not indeed of different qualities in nature, but of men's notions in regard to the different natures of diseases. Until, therefore, three different continued fevers were shown to exist, and until it was shown that these had, respectively, the qualities implied by these names, it seemed improper to employ such names.

But, for a good while, the name, typhus, has been getting into common use, as the most common appellation of the continued fever of England, and of that of this country, or, at least, of New England. And under this, as an arbitrary, and not a significant name, it has been spoken of and described, more or less accurately by many writers. Under these circumstances, I had just become reconciled to adopting the name, as being one so generally received, that it must continue in prevalent use; and that, as its sig-

nificant character had been dropped, there was no harm in employing it. Now my friend, Dr. Gerhard, proposes to restrict the name, typhus, to the disease which he has recently described, and to leave to the continued fever of Louis the name of typhoid fever. Names, when arbitrary, are of so little importance, that I would not waste a moment on a choice, if only they can be so used, as to avoid mistakes and confusion. But I am truly puzzled, as the matter now stands, which name to adopt. After much hesitation, I have decided to call the disease typhoid fever.

Let me add, that as far as my knowledge extends, this is the continued fever of New England, as I believe it is that of Old England. But exceptions may occur in both countries. With us it prevails every year, though not equally; and may be seen in any month of the year. But it is most prevalent in the autumn. In some seasons, it prevails extensively, and may be called epidemic. In others, it is limited to small neighborhoods, and even to a single family, not even the near neighbors being affected. In that case, it will pass slowly through the family, attacking new residents, but not often watchers and visiters for a day. It will be from three to six months in passing through a large family. I have seen this happen in summer, but oftener in winter. Persons removed from such a family to other houses do not communicate the disease; which seems to disprove the existence of contagious properties. The experiment has often been tried under my observation,

from necessity, and the disease has never been propagated by the person removed. In one case, four persons were removed from one diseased family to four different families, and no disease was produced in any of them.*

The disease, which prevailed among us in 1808, and for some years after, under the name of petechial fever, was different from our common continued fever. The observations on it were not made, as they would be at the present day, and its characteristics cannot be distinctly stated. Meanwhile, I will remark, that I think my friend, Dr. Gerhard, has fallen into an error, in thinking that the disease was the same which he has lately described under the name of typhus, and which he has witnessed in Philadelphia. The petechial fever seldom had premonitory symptoms; it was sudden in its attack, and usually short in its course; often an ephemera, or fever of one paroxysm, and then terminating within forty-eight hours, which is the limitation of an ephemera laid down by Fordyce.† These characters do not surely belong to the disease he has described.

The cases, from which this report is made up, were none of them left to themselves. In almost all, active treatment, as the French would term it, was employed at some period, and in most of them during the first and second week of the disease. Hence the natural history of the disease cannot be

* See a paper of mine in New England Journal of Medicine, &c., Vol. XI, page 225.

† Dissertations on Fever, by George Fordyce.

deduced from them, with the same certainty, as from cases in a Paris hospital, where active treatment is so little employed in many cases. For instance, in almost all our cases, vomiting, or full purging, or both, were induced by medicine, in the first or second week of disease. Hence, perhaps, diarrhœa was a less constant symptom with us than in Paris. It will, however, be sufficiently apparent, I trust, from the symptoms, that our disease was the same as that so well known in that city.

But the value of particular symptoms, in relation to the prognosis, may perhaps be more certainly estimated from our cases, than in relation to diagnosis. The influence of age also, on the result, will likewise be shown, so far as the number of our cases can go to decide it.

I am inclined to think, that something will be learnt as to the effects of remedies. This may be relied on, that whatever is stated under this head will be done fairly, with the impartiality of a mere observer. This will be more readily believed, when it is remembered, that a large share of the treatment was conducted by others, and that I cannot have the feeling of partiality for the remedies employed, which is felt by one who gives an account of his own practice. It will be believed still more fully, if I give a history of my own views and opinions on the treatment of fever, and of the changes they have undergone. There may seem to be too much egotism in this; but it will not appear to be so much, when I add, that the same opinions have been entertained,

and that the same changes, or nearly the same, have taken place among a large part of my contemporaries, within the circle of my acquaintance; and that by giving this history, I shall possess the reader more fully and distinctly with the different methods employed in different cases, which methods are to be the subjects of comparison.

In New England, so far as I have been able to learn, it has long been the custom to evacuate the alimentary canal freely at the commencement of acute diseases. The use of cathartics has been so common, that they have been the domestic remedies first resorted to, under any threatening of acute disease, before sending for a physician. Emetics not unfrequently have been used in the same way. I well remember that my professional master did not so much endeavor to prove the utility of these medicines in the treatment of typhoid fever, as to decide which should be employed first. The emetic was commonly given first by the physician, in grave cases at least; but he instructed me that, in cases of constipation, there was often a benefit in giving the cathartic first. The reason seemed to be that, when the bowels were loaded, and were excited to action by the presence of the emetic substance in the stomach, the stomach itself was embarrassed, and could not so easily and so perfectly perform the operation of vomiting; nor under those circumstances could the rest of the system be so advantageously affected by sympathy, as when the bowels were comparatively at ease. In many cases, the physician combined the

emetic and cathartic medicines, making what was called an emetico-cathartic, leaving it to the disposition of the organs, and to a sort of chance to determine the amount of evacuation in one mode or the other.

Blood-letting, at the commencement of continued fever, has been a more rare practice in New England than in many other parts of the world; and was resorted to only when symptoms regarded as highly inflammatory were present, or when vomiting and purging had failed to give relief to the urgent symptoms of the early period.

Preparations of antimony, at least to the extent advised by Cullen, were resorted to very commonly, when my knowledge of the practice here was first acquired; yet they were not very confidently relied on. Preparations of mercury, especially the submuriate (calomel), were in much higher esteem, in the treatment of both continued fever and in the phlegmasiæ. Calomel almost always made a part of the cathartic administered by the physician at the commencement of the disease; or it was combined with ipecacuanha, or with tartarized antimony, in the emetico-cathartic. After this, the calomel was given in small doses, frequently repeated; from four to ten grains a day by the most prudent practitioners. This was either combined with antimonials, or with ipecacuanha, or alternated with them; and opium was often added, in doses of a sixth to a third of a grain to each dose of calomel, to prevent the too free operation of this article on the bowels. In this way,

from half a grain to a grain and a half of opium was often given in a day. It was not thought necessary, however, to prevent all motions of the bowels. On the contrary, it was considered an object to have dejections from them daily, or, at the least, every other day. Two or three dejections a day were not objected to, unless there was an increasing weakness and obvious exhaustion from them. In the use of calomel, it was thought useful to have a slight soreness of the gums, and even a little ptyalism induced. Prudent physicians endeavored to guard against any severe affection of the mouth; but, if now and then this occurred, it was regarded as the fortune of war, the result, perhaps, of an unforeseen idiosyncrasy in the patient, and an evil, which he ought to bear with patience, rather than to forego the aid of the Herculean remedy. The physician regarded the patient as even more secure as to recovery, though his suffering might be greater when the mouth was decidedly sore; and he was careful to watch against this effect, more because the patient would be offended, than because he would be injured by it.

This mercurial practice in acute disease began, in New England at least, quite as early as the middle of the last century, as I learnt from my master, the venerable Dr. Holyoke, who commenced practice at that period. It was then indeed limited to a few physicians, but had become universal before my studies commenced forty years ago. I was surprised, in attending the hospitals in London in 1799 and 1800, to find this practice, so familiar here, in typhus,

pleurisy, pneumony, &c., as well as in hepatitis and cephalitis, to be unknown there. Inflammation, or rather dropsy of the brain, as it was called, was combated by calomel; and Dr. Saunders, on the authority of physicians in Bengal, advised the use of calomel in acute, as well as in chronic inflammation of the liver. But in neither case was the remedy advised on general grounds, as one adapted to overcome inflammation. The use of it in continued fever would at that day have been regarded, by most physicians in England, as in the highest degree preposterous. I well remember how much I laughed within me, as young men are wont to do, at the folly of my masters, who could not see what I thought the true principle, on which the calomel proved useful in hepatitis; so that they were blinded to the extensive use, which might be made of it in other inflammations. In these views I was confirmed a few years afterwards, when some English physician, a Dr. Hamilton, I believe, first recommended the extensive use of calomel in acute diseases, such as we had long been accustomed to, and such as many of the British practitioners have since that time adopted.

In addition to these remedies there were many others of minor efficacy. One other, however, not of slight power, was vesication. This was employed sometimes at an early period for severe headache, or other severe pain, when not relieved by evacuations; and much oftener at a late period, either as a general stimulant, or with a view to combat grave symp-

toms, particularly when these were referred to the brain.

Such, substantially, was the practice in this quarter, as I learnt it, when I began my professional life, and this I adopted. I looked on bloodletting with great jealousy, except locally for specific objects; and I felt a firm faith in the potency of mercurials, if so employed as to cleanse the alimentary canal thoroughly and to answer the purpose of alteratives. It was following the idea of Mr. Hunter, that they altered morbid action, not the older notion that they altered the humors of the body.

A young physician does not at once have an opportunity to bring his opinions to the test of experience. In the fifth and sixth years of my practice, typhoid fever, not of the most severe character, prevailed extensively in this city. I did not need a case-book, for my mind, intent on the subject, retained every case which I saw, and I think it does not fail me in recalling the results, to which I arrived in a review, at that time, of my experience. My favorable opinions of early evacuations were confirmed; and that of an emetic at a very early period was rendered more favorable than before. Of antimonials, used alone, I made no trial, but I employed them somewhat in combination with calomel and opium. My faith in calomel was shaken, not destroyed. I became satisfied that the benefits of this article were not sufficient to justify the risk of a severe ptyalism, or very sore mouth; and that the

use of it so far as to induce any soreness of the mouth was of very doubtful utility, unless this was done at a very early period; that is, within five, or certainly within seven days from the commencement of the disease. But of the benefits of early care and medication in the disease, there seemed to me to be no doubt. My fatal cases were entirely, or nearly so, among those, who called on me in the second week of the disease, or later. Indeed, I came to the conclusion, that there must be something peculiar in a case to excuse the physician from censure, if he lost a patient to whom he was called as early as the third or fourth day of the disease. As my observations were made mostly amongst the poor,—for among the rich this disease was then rare, and the poor do not call for early attendance,—I lost my fair proportion of patients; but this I considered as their fault, not as mine.

It is from a belief that this represents a change of opinion as to mercurials, which many others among us have undergone during the first quarter of the present century, that I state it thus fully.

About 1812, I learnt, from Odier's Manuel de Medicine Pratique, the bolder use of antimony in febrile diseases. The method recommended by him was to exhibit this medicine every two hours, in constantly increasing doses, until it was ascertained how large a dose the patient could bear. Introduced thus gradually, he said, the medicine could be borne in much larger doses, than if given freely at first. To this mode of treatment I gave a trial, during an epidemic typhoid fever in 1814, and thought it prefera-

ble to the mercurial practice. Emetics and cathartics were first given, and then the tartarized antimony (tartar emetic), in the dose of one eighth of a grain; each succeeding dose was increased by an eighth of a grain. In this way, many persons were brought to take half a grain to a grain at a dose; some two grains, and a few three and four grains at a dose; and this without any important effect on the stomach, or bowels. I am not aware that the Italians had, at this period, adopted the use of this article, in large doses. Under the use of it, the more grave symptoms seemed to me to subside, and the disease to go on quietly, without secondary affections, and a favorable result to be produced oftener than when the antimony was not employed.

But, in some following years, I was led to doubt, whether I had not attributed too much virtue to this medicine, and gradually I used it less and less. It will appear that I resumed it at a later period. At all times, however, I found patients whose stomachs would not bear the medicine, even in small doses. I will add, that those, to whom it seemed most useful, would, after using the full doses for three or more days, express a reluctance, or even a sort of horror, in repeating it, although it produced no nausea, nor any sensible effect on them. If continued after this, the patient would appear to be sunk and very uncomfortable; so that I soon was taught to give up the medicine, or to give it in smaller doses, and at longer intervals, as soon as this feeling was manifested. I will add, that more lately I have learnt an

effect of this article, which requires to be guarded against. This is a vesicular eruption in the fauces, and an inflammation more or less extensive there, analogous to the effect of the same medicine, when applied to the skin. I believe that this evil will not be produced, when the medicine is well diluted; say two ounces of water at least to every grain of the tartarized antimony.

When the hospital was opened, the use of mercurials had not been relinquished so much by others as by myself; and I still employed them occasionally in the first three or four days of the disease, and still more when any important secondary disease, of an inflammatory character, was added. But the faith in them was lessening from year to year; and they have been given up almost entirely, in typhoid fever, since 1830.

In accordance with this statement, I find, on looking at the cases, that mercurials were employed efficiently among those, who entered in the 1st or 2d week of the disease, in fifty-five cases. The whole number who entered in those weeks was two hundred and twenty-nine. Of these fifty-five cases, fifty-three were admitted prior to the year 1831, two in that year, and one in the year 1833. To see the force of this statement, it must be observed that the whole number of cases, prior to 1831, was one hundred and forty-five; and the whole number in 1831 to 1835 inclusive, was one hundred and fifty-eight.

In the year 1833, we began to doubt the benefit of active treatment, or at least of any continued active treatment; though few patients were allowed

to go without a cathartic. This doubt was sustained by one of my colleagues, who had the charge of the hospital usually from July to the middle of October, more than by myself. I commonly had the charge for five or six months from the first or middle of October till March or April. During the years 1833, 1834 and 1835, I usually employed antimonials, according to the method of Odier, in cases admitted in the first week of the disease, and occasionally in those admitted later, except where some objection showed itself in the peculiarity of the case, and except in very slight cases. I also continued the early evacuations, but did not so often employ cathartics after the first days, as I had previously done.

These statements must be borne in mind when we come to the comparison of the different modes of treatment. I trust that this full account of the view, or theory, on which each mode was pursued, will enable the reader to comprehend the treatment more perfectly than he would otherwise do. In saying this, I am fully aware that the question in each case is, not by what theory the physician is governed in his treatment of a disease, but what he has actually done. I wish also to add, for myself, that, in whatever course was adopted, I endeavored to judge fairly what support was given by the result to the usefulness of the remedies employed, and to the truth of the theory, by which their application was directed. It was not, however, until I had finished a careful analysis of all our cases, the result of which I shall give, that I felt any strong convic-

tion of the relative advantages of different modes of treatment. Nor do I now profess that any thing more, than an approximation to an estimate of these modes, is to be authorized by these reports. If they are regarded rightly by others, they may serve as a foundation, on which to institute future experiments.

Let me also add, that no patient need be alarmed in finding our treatment of him regarded as an experiment. Such, probably, must long be the case in medical practice. The patient's assurance should be grounded on this, which ought to be the rule, and will be the rule of every honest physician, viz.; that in each case, the physician will try that experiment, which, in the present state of his knowledge, appears most likely to be successful.

In relation to this matter, I must add one more remark. The numerical method is easily followed in stating the numbers who recover, and the numbers who die of any disease, under various modes of treatment; and likewise the duration of the disease in those who recover. But it is very difficult to state in this way the trouble, or the comfort, occasioned by these different modes. The ancient rule, as to the cure of the sick, was, to do it safely, quickly and pleasantly. This last cannot easily be estimated in numbers. How safely and how quickly the patient is brought to a state of convalescence may be determined with a good degree of precision.

REPORT OF CASES OF TYPHOID FEVER

IN THE

MASSACHUSETTS GENERAL HOSPITAL.

THE whole number of cases, sufficiently well marked to be the subjects of a critical inquiry, was 303. In addition to these, there were 65 cases, which may be regarded as doubtful. In some of these, the details on record are insufficient to be the foundation of a clear diagnosis. In some, there is no doubt, and in others very little, as to their claim to be admitted, as cases of typhoid fever. But the details in these are insufficient to enable one to determine the period, at which disease commenced, and therefore the cases are of little value as to most points. They ought, indeed, to be kept in view, when calculating the proportion of fatal cases. It would be safe to say, that, of these 65 cases, 40 should be admitted as cases of typhoid fever. One only of the 65 cases terminated fatally.

Fatality of the disease.—Of the 303 cases, 42 proved fatal; that is (303÷42=7.214) 1 in 7.214 was fatal. But if we add the 40 cases, among

which there was one death, we find (343÷43=7.976) 1 fatal case in 8 nearly. In all future calculations, 303 will be regarded as the whole number of cases.

Sex.—The whole number of males was 208; and that of females was 95. It would be improper to ground any calculation, as to the relative frequency of the fever in the two sexes, upon this statement. It is probable that females have never resorted to the hospital so readily as men have; it is certain that this was true the first years after its establishment. In 1821, there was not any case. In 1822 to 1826, inclusive, there were 54 male, and 11 female patients; making the whole number 65, affected with typhoid fever; so that 1 in 6 nearly was a female. In 1827 to 1835, inclusive, there were 154 male and 84 female patients; in the whole 238, so that 1 in 3 nearly was a female. Even here, perhaps, the proportion of females affected with this disease was less than that, which actually occurs in the whole community. Yet it is true, as I believe, that this disease occurs among men much more frequently than among women.

Among the males, there were 28 fatal cases and among the females, 14; so that among the males (208÷28=7.392) 1 in 7.392 cases was fatal. Among the females (95÷14=6.785) 1 in 6.785 was fatal.

Age.—The age was recorded in 291 cases, and among these the average age was 23.309 years. Among the cases, which terminated favorably, the average age was 22.980. There was a difference between the males and females; for the average age

among the males was 22.908; while among the females it was 24.044, being more than a year greater in the females than in the males.

The ages were recorded in 27 of the fatal male cases, and among them the average was 24.926. They were recorded in all the 14 fatal cases among the females, and the average was 26.071. In the 41 cases taken together, the average age was 25.317. Thus it appears that the average age was about 2 years more in the fatal cases than in all the cases taken together, and about $2\frac{1}{3}$ years more than in the cases not fatal. A more minute examination into this subject confirms more strongly the influence of age on the event in this disease.

In the whole number, whose ages were recorded, viz., 291, there were 16 aged 35 or upwards, and of these, 4 died, or 1 in 4; whereas in all the 303, there died 1 in 7.214. And there were 34 cases where the age was 30 or upwards, and of these 8 died, or 1 in $4\frac{1}{4}$, nearly in the same proportion as in those of 35 years or upwards. If we deduct these 34 from 291, we leave 257, who were under 30 years of age. As there were 42 deaths in the whole, and in 1 of the fatal cases the age was not ascertained, and as there were 8 fatal cases in the 34, it appears that there were 33 fatal cases among the 257. Among these, therefore ($257 \div 33 = 7.787$), 1 case in 7.787 was fatal. Again there were 87 cases, in which the ages were 20 or under, and among these there were 8 fatal; so that among these the fatal cases were ($87 \div 8 = 10.875$) in the proportion of 1 in 10.875 cases.

The period of the disease, at which patients entered the hospital, had a manifest influence on the result,* as will appear by the following statement.

90 cases were admitted in the first week of the disease; of these 7 died, or 1 in 12.85.

139 cases were admitted in the second week of the disease; of these 16 died, or 1 in 8.68.

46 cases were admitted in the third week of the disease; of these 10 died, or 1 in 4.60.

21 were admitted in the fourth, or later; of these 5 died, or 1 in 4.20.

It will be found, that the same circumstance has a great influence on the period of convalescence, and that perhaps a day is important. I will therefore add the following table, in which the result is shown as to those admitted on each of the first fourteen days of the disease.

On	the	1st	day,	3	entered,	of whom	none	died.
"	"	2d	"	6	"	"	"	"
"	"	3d	"	10	"	"	1	";—1 in 10.
"	"	4th	"	11	"	"	none	"
"	"	5th	"	22	"	"	3	";—1 in 7⅓
"	"	6th	"	18	"	"	1	";—1 in 18.
"	"	7th	"	20	"	"	2	";—1 in 10.
"	"	8th	"	47	"	"	6	";—1 in 7 5-6
"	"	9th	"	17	"	"	3	";—1 in 5 2-5.
"	"	10th	"	22	"	"	2	";—1 in 11.
"	"	11th	"	27	"	"	2	";—1 in 13½.
"	"	12th	"	9	"	"	2	";—1 in 4½.
"	"	13th	"	6	"	"	none	"
"	"	14th	"	11	"	"	1	";—1 in 11.
			In	229,			23	died;—1 in 9.95.

*The same thing was found to be true in regard to cases of pneumonitis in our hospital. See my Appendix to Louis on Blood-letting, translated by Dr. C. G. Putnam.

It will be seen, that in the first four days of disease, 30 were admitted, of whom one only died; and in the remaining 11 days, 199 were admitted, of whom 22 died, or 1 in 9. Accidental causes have an influence on the small number admitted on any one day of the disease, but this comparison is between numbers sufficiently large to exclude any great influence from accident. In pointing out this advantage of an early admission to the hospital, in cases of typhoid fever, I state what the facts warrant. Let it not be supposed, that this advantage is set down to the medicinal treatment of the patients. That alone may be conducted as well elsewhere. The advantage is to be attributed to the many comforts and immunities, which the patients enjoy there, more than the same class of patients can commonly command at their own places of residence.

The following table will show the numbers admitted, and the numbers who died, in each year. It also shows those of each month. It should be kept in mind, that patients are not always admitted in the month, in which the fever commences; many are taken sick on the month before admission. It is also obvious, that death often takes place on one of the following months, so that cases are entered on months, in which they neither commenced, nor terminated. This is noted, in order to guard against false inferences.

TABLE, *exhibiting the numbers admitted and the numbers who died in each year and in each month.*

	IN THE YEAR.			JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER		OCTOBER.		NOVEMBER.		DECEMBER	
	Adm	Died	1 dth. in	Adm.	Died.	Adm.	Died	Adm	Died	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.	Adm.	Died.
1822	1																							1			
1823	5																	2				2		1			
1824	15	3	5									1		1		1	1	3		2	1	3	1	4			
1825	18	2	9													1		3		2		7		3	1	2	1
1826	26	3	8 1/3			1	1							3	1	4		4		8	1	2		1		3	
1827	19	3	6 1/3													4	1	5		1		6	1	2	1	1	
1828	22	2	11	1	1	1		1				1		1	1	2		4		3		6				2	
1829	26	1	25	1	1											1		11		9		3					
1830	14	4	3 1/2	1				1	1	1						3	1	1				4	1	3	1		
1831	29	2	14 1/2			1						1		1		7		4	1	6	1	7		1		1	
1832	23	4	5 3/4	2										1	1	1		4		7	1	4	1	2		2	1
1833	37	6	6 1-6	1	1											3	1	2		8	1	17	1	5	2	1	
1834	34	6	5 4-6	2	1	2						1	1			1		2	2	7		11	1	6	1	2	
1835	35	6	5 5-6	2		1								3		3		3	1	9	2	7	1	4	1	3	1
	303	42		10	4	6	1	2	1	1		4	1	10	3	31	4	48	4	62	7	79	7	33	7	17	3
	1 death in 7.21 patients.			1 d. in 2.50		1 d. in 6		1 d. in 2		No death.		1 d. in 4		1 d. in 3.33		1 d. in 7.75		1 d. in 12		1 d. in 8.65		1 d. in 11.28		1 d. in 4.73		1 d. in 5.66	

In the cold months, January, February, March, October, November and December, there were 147 cases, and 23 deaths; that is, 1 in 6.39.
In the warmer months, April, May, June, July, August and September, there were 156 cases, and 19 deaths; that is, 1 in 8.21.
If we take the five months in which the disease prevails most, viz., July, August, September, October and November, we have 253 cases, and 29 deaths; that is, 1 in 8.72.
In the other seven months, December, January, February, March, April, May and June, we have 50 cases, and 13 deaths; that is, 1 in 3.84.
It appears, then, that at the season when the disease is most prevalent, the mortality is not half so great as at the season when it is least prevalent.

Convalescence.—In deciding on the period of convalescence, the same rule is followed which was adopted by M. Louis, in regard to pneumonitis, in in his work on blood-letting. In some instances, perhaps, the application of this rule is not perfectly satisfactory. But in the great majority of cases I think it is so; and I have not been able to fix on other rules, which appear to me as good as this. By this rule, the day of convalescence is that, on which the patient begins to take some solid food, such as bread or rice; the febrile symptoms having abated for two, or three preceding days. By febrile symptoms, in this case, I mean, particularly, heat and acceleration of the pulse. In doubtful cases, however, I have had regard to all the circumstances in noting the day of convalescence. It may not be improper to state, that these rules were not thought of, when the cases were going on and the records made.

In many instances, the period of convalescence was delayed by secondary affections; in a few, by causes strictly accidental, that is, not at all growing out of the principal disease; and in not a few, by errors in diet, or by undue efforts of body or mind. In some few instances, after an unequivocal convalescence in all points, for two, or three, or more days, a secondary disease has ensued. In these, I note the first day of convalescence. But, in the few instances, where there has been a relapse into the typhoid fever after a temporary convalescence, I have noted the second convalescence as the true one.

As the day of convalescence is numbered from the

day, on which the disease commences, the accuracy of one depends on that of the other. There is more difficulty, perhaps, in ascertaining the commencement in cases of typhoid fever, than in many other acute diseases. The beginning is not indeed well marked, in many cases; and the patient, whose mind has become dull, at least, in the progress of the disease, cannot well carry his memory back to the first days. This is more true, as the disease is more advanced. Thus the day of the attack may commonly be settled, with a good degree of certainty, in one who enters in the first week; with less certainty in one, who enters the second week of the disease; and with much less in one, who enters later. It almost always is found, when means occur of correcting the first story of the patient, that he did not date his attack early enough. In one who has been sick many days, there is a disposition to date by weeks. This explains why so many appear to have entered the hospital on the 8th and 15th days. They say they have been sick a week or a fortnight before admission; and having said so, many insist upon it; though probably they have, on an average, been sick longer.

Among the two hundred and sixty-one patients who recovered, the period of convalescence was ascertained with a tolerable degree of accuracy in two hundred and fifty-five. Among these the average day of convalescence was the 22d, or precisely 22.019. The difference between *males* and *females* was very slight as to this day; the average of the former being above one third of a day more than of

the latter. *Age* had a greater influence. In those under twenty-one years of age, the average day of convalescence was 20.27; while in those aged twenty-one years or over, it was 22.23: being nearly one tenth, or 2 days in 20 more in those twenty-one years old or upwards, than in those under twenty-one.

The difference as to the day of convalescence in different years was very great, the extremes being nearly eighteen in one year, and nearly twenty-six in another. All this will appear, in the following table. As a matter of convenience, I have included in this table a statement of the number of patients admitted in each year, under the care of the physician, and the proportion of those who had typhoid fever.

TABLE, *exhibiting the average day of convalescence among the subjects of typhoid fever in each year, from* 1824 *to* 1835, *inclusive; also the proportion of the same subjects to the whole number of medical patients in the hospital in each year.*

Year.	Average day of Convalescence.	Whole No. of Med. cases.	The cases of fever being one in
1824	24.	221.	14.7
1825	19.60	278.	15.4
1826	19.82	392.	15.0
1827	22.	251.	13.2
1828	18.55	357.	16.2
1829	19.91	342.	13.6
1830	22.55	285.	20.3
1831	24.77	326.	11.2
1832	17.73	318.	13.8
1833	22.29	328.	8.5
1834	25.92	336.	9.8
1835	24.93	311.	8.8

It appears, from this table, that the cases of fever were much more numerous, in proportion, in the last three years, than previously. Undoubtedly the

disease was more prevalent than usual in the city and its vicinity in those three years. In those years, likewise, the convalescence was later, and the fatality was greater, than usual. It is a question, whether these unfavorable results should be attributed to the greater severity of the disease, or to the less active treatment adopted in those years.

The period of admission had a great influence on the length of the disease, as well as on its fatality. The average day of convalescence among those, who recovered, was, in those who were admitted in the first week of disease, 17.42; in the second week, 21.21; in the third week, 25.52; in the fourth week, or later, 43.93.

The proportions will be better seen, if we suppose ten to represent the day of those of the first week; and then, in proportion, it will be found that the days of the others will be represented by 12.1, 14.6, and 25.2; or, omitting the fractions, they will be ten, twelve, fourteen and twenty-five.

There are a few instances, in which the 4th and 5th days are marked as the days of convalescence. Some persons may doubt the accuracy of our diagnosis in these cases; and perhaps even in those, in which convalescence is noted as early as the 8th or 9th day. On this point, I will remark, that in every fatal case, which we had regarded as typhoid fever, where due examination was made after death, the pathological changes described by M. Louis as essential, were found to exist in an unequivocal manner. This is some evidence of the accuracy of our diagnosis. But fur-

ther, if several persons are seized at, or about the same time, under similar circumstances, with the same symptoms, and if under judicious management a part of them recover early, while the rest go through the disease, it may be fairly inferred that they would all have gone through the same, if the treatment had been omitted. The following statement respecting cases, which occurred among the nurses and servants of the hospital, will bear on this point. Other evidence of the same kind could be offered, but it would require the statement of many details to present it clearly and with advantage. The following admits of comparatively a brief history.

In 1829, from the 18th to the 28th of August, there were four persons employed in the hospital attacked with typhoid fever. Two of them were nurses, one the porter, and one a woman employed in the kitchen, I believe, as a washerwoman. The last of these is marked on my list as convalescent on the 7th day, and then was so well as to be discharged from the ward. One of the nurses, a healthy woman but never vigorous, was marked convalescent, and indeed free from disease on the 9th day, and perhaps might have been called so earlier. She had however, been treated very actively, was reduced by venesection on the 2d day, and by vomiting and purging; so that she regained her strength slowly, and on the 20th day from her attack, she was sent into the country to recruit. She was, however, free from disease, from the 9th day. Both of these were of mature age, the washerwoman 41;

and both prudent in their general conduct. The other nurse was young and not prudent. She had an emetic, and was cupped, on the 1st day, with relief. On the 3d and 4th days, she had calomel and antimonials. On the 8th day, she appeared well, and was discharged from the sick list. There was perhaps an error in trusting her to herself so early. She soon became sick again, but did not return to the care of the physician till the 16th day, when she had severe headache, great derangement of the alimentary canal, &c., &c. Cerebral symptoms did not supervene, and on the 22d she was again convalescent. The absence of cerebral symptoms was noticed in almost all the cases of this year. In this case, the benefit of the early treatment was not entirely lost.

The porter was evacuated freely on the first day by the house-physician, but did not enter the ward. After two days he returned to his work. On the 11th day, he entered one of the wards with decided symptoms of typhoid fever; he never had grave cerebral symptoms. He was convalescent on the 24th day, but not well reëstablished on the 30th day, when he was discharged. In four days he returned. It appeared that he had eaten voraciously, and had been exposed to inclement weather. The result was great derangement of the alimentary canal, with prostration of strength. He was not convalescent again till the 44th day, and was not so well as to be discharged till the 63d day from the commencement of his disease. He was twenty-three years of

age. His disease commenced on the same day as that of the nurse first mentioned, viz., the 18th of August. There can be no doubt that one week of careful restraint, after the early evacuations, and common prudence afterwards, would have saved this man from his protracted sufferings.

That all these four patients had the same disease there cannot be any doubt, nor any, that that disease was typhoid fever. I shall add one more case in the same season.

Oct. 13th, another woman employed in the hospital-kitchen, was attacked by the same disease. She had a cathartic on the 2d day, and was received into the ward on the 3d day. On that day she was vomited and purged freely, with decided relief. She was purged again on the 4th day. On the 5th and 6th days, she had slight exacerbations in the afternoon. On the 8th day, she was decidedly convalescent; indeed the disease had ceased. A nasal catarrh followed, and a slight cough afterwards, but without serious inconvenience. She was kept under observation till the 20th day, when she was discharged quite well.

I proceed next to give an account of some of the prominent symptoms, or at least of those which were most uniformly and definitely noted in our records; and to draw from them such inferences as they may afford in reference to the prognosis.

SYMPTOMS.

Tongue.—With few exceptions, the tongue was

noted as coated, or furred. The other characteristics of the morbid state of the tongue, frequently noted, are dryness, a dark color of the fur or coat, and a denuded state. I believe that these were not uniformly noted when they occurred; but that the omissions were not numerous after the first four years. In these years, 1822-5, the notes were much less full and precise than afterwards; thus, in that time, the tongue was noted as dry in only six cases. Omitting these years, therefore, I shall state the appearance of the tongue in the years 1826 to 1835, inclusive. In this period, the cases were 177 males and 87 females; in the whole, 264. Among these the tongue was

Dry	in	92 males	(177÷92=1.92),	or in 1	case	in	1.92	cases.
"	"	40 females	(87÷40=2.17),	or in 1	"	"	2.17	"
"	"	132 cases	(264÷132=2),	or in 1	"	"	2	"
Denuded	"	35 cases	(177÷35=5.05),	or in 1	"	"	5.05	"
"	"	13 females	(87÷13=6.69),	or in 1	"	"	6.69	"
"	"	48 cases	(264÷48=5.50),	or in 1	"	"	5.50	"
Dark	"	30 males	(177÷30=5.90),	or in 1	"	"	5.90	"
"	"	12 females	(87÷12=7.25),	or in 1	"	"	7.25	"
"	"	42 cases	(264÷42=6.28),	or in 1	"	"	6.28	"

The tongue was dry in 132 cases, and of these 28 were fatal; so that (132÷28=4.71) 1 case in 4.71 cases, where the tongue was dry, proved fatal.

The tongue was denuded in 48 cases, of which 6 were fatal; or (48÷6=8) 1 case in 8, where the tongue was denuded, proved fatal.

The tongue was dark in 42 cases, of which 13 were fatal; or (42÷13=3.23) 1 case in 3.23, where the tongue was dark, proved fatal.

It thus appears, that a dry tongue was an unfavorable sign, and a dark one still more so; but that a denuded tongue was not unfavorable. For 1 in 8 is rather better than the common chance, as appears by what has been stated before.

Nausea and vomiting are frequent symptoms, particularly at the commencement of this fever. To present them justly, some discriminations would be necessary. I fear that these have not been made sufficiently; and I think that no benefit would be obtained from the numerical statement, which I am able to make.

Dysphagia.—A difficulty in deglutition, more or less strongly marked, and sufficient to be noted, occurred in 21 cases, of which 4 were fatal; that is, where this symptom occurred, 1 case in 5.25 proved fatal. This then is an unfavorable sign; but not extremely so. If, however, we were to count only those cases where the dysphagia was very great, we should find the symptom much more unfavorable.

Meteorism.—This symptom was of frequent occurrence, and so were pain and tenderness of the abdomen. But the terms used at different times, to express these symptoms, are so various, that I have not attempted to decide on their frequency.

Diarrhœa.—In the years 1824 to 1835 inclusive, there were 297 cases, of which 42 were fatal. Diarrhœa was noted in 167 of these cases, viz., 129 males and 38 females. Of these 167 cases, 32 were fatal, viz., 21 males and 11 females. Thus diarrhœa occurred ($297 \div 167 = 1.77$) in 1 case in 1.77; and

this symptom was followed by death (167÷32=5.21) in 1 case in 5.21 cases. The cases in which diarrhœa did not occur (297—167=130), were 130, of which 10 were fatal; so that in these there was (130÷10 =13) one death in 13 cases. It thus appears that diarrhœa is an unfavorable symptom. This was not equally true in all the years; which may have been owing to treatment.

Hemorrhage from the bowels, or bloody dejections, occurred in 31 cases, of which 20 terminated favorably, and 11 unfavorably. This symptom occurred, then (303÷31=9.77), in one case in 9.77, or 1 in 10 nearly. In the cases in which it did occur (31÷ 11=2.81), 1 in 2.81, or 1 in 3 nearly, proved fatal. In all the fatal cases (42÷11=3.81), this symptom occurred in 1 case in 3.81, or one in 4 nearly. In the favorable cases, it occurred (261÷20=13.05) in 1 of 13.05, or 1 in 13 nearly. In 272 cases it did not occur, and among these 31 were fatal; or (272÷ 31=8.77) 1 in 8.77 was fatal. It is then more unfavorable than diarrhœa. In some instances, the hemorrhage was followed by relief, and in a few by well-marked and permanent relief. But in most, there was great weakness and sense of exhaustion in consequence of it.

Pulse.—In 290 cases, the frequency of the pulse was noted; and it appears from them that, on an average, the least frequent pulse is 77.07; and the most frequent 106.44. If the average of each year be taken, there is no small difference; thus, in 1826,

the average of the least frequent pulses, in the various cases, was 70.08; while, in 1823 and 1824, it was 84. In 1826, the average of the most frequent pulses was 100.30; while, in 1824, it was 122.22. If we look to the individual cases, we find the least frequent pulse to be 40; this frequency was noted in one case in 1826, and in one in 1830, both males. The most frequent was 168, and this was in a female in 1830; the event in this case was fatal. In two cases, both male, it was 156; one in 1824, fatal; one in 1825, not fatal. The most frequent pulse noted in any female, where the event was not fatal, was 152. This was in 1828.

It should be particularly observed, however, that the regular visit at the hospital was always in the morning, between 8 A. M. and noon. The pulse was sometimes noted in the afternoon, or evening; but this was not done ordinarily.

In the fatal cases, the average of the lowest pulses was, in males, 85.50; in females, 106.64; in the whole, 91.88. In the same cases, the average of the highest pulse was, in males, 124.29; in females, 138.85; in the whole, 129.29. In one of the males, the highest pulse was not noted. In the favorable cases, the average of the lowest pulse was 74.16; and that of the highest was 102.68. We see, then, that much reliance may be placed on the frequency of the pulse, in forming a prognosis. In the following table, these particulars are stated in a form, which facilitates comparison.

	AVERAGE OF least frequent pulse.	most frequent pulse.
In 290 cases, all in which the pulse was sufficiently noted,.....	77.07	106.44
In 1826,.....	70.08	100.30
In 1824,.....	84.00	122.22
In the cases which terminated favorably, taken alone,.....	74.16	102.68
In the cases which terminated unfavorably, taken alone,.....	91.88	129.29
In the males, among these fatal cases,.....	85.50	124.29
In the females, among the same,.....	106.64	138.85

Ordinarily, the pulse was much diminished in frequency after convalescence, but not in all cases. In some it became more frequent, and continued so many days, although the increase of strength and the subsidence of other symptoms left no doubt of the real amendment of the patients.

As other characteristics of the pulse are less definite than that of its frequency, they are not given. Physicians differ widely, in estimating hardness and softness, strength and weakness, &c., of the pulse. Intermission is a more definite character; but I have reason to suspect that this was not always noted, when it occurred; and I have therefore not stated how often it was noted.

Epistaxis.—This symptom was noted in 74 cases; in some of which it was slight, in some copious and frequently repeated. It was, however, rarely very copious. I think it almost certain that it occurred, though very slightly, in some cases, in which it was not noted. According to our notes, then, epistaxis occurred ($303 \div 74 = 4.09$) in 1 case in 4 nearly. In the cases, in which it was noted, 11 were fatal; so

that, where it was noted (74÷11=6.72), 1 case in 6.72 proved fatal. But if all the instances of its occurrence had been noted, it probably would be found, that the fatality was not greater in them than in the whole number of cases. If, however, the cases of copious hemorrhage from the nose be taken alone, the result might be very different. It appears that among all the fatal cases, 42, epistaxis occurred (42÷11=3.81) in one case in 3.81. While among the favorable cases, it occurred in (261÷63=4.14) 1 case in 4.14. In a view of all the circumstances stated, it is not to be regarded as a very unfavorable symptom; unless, perhaps, when very copious.

Chills, rigors, heat.—In a very large proportion of cases, chills occurred, either at the commencement, or late in the disease, or both. Rigors were much less frequent. Heat, as felt in excess by the patient, or noticed by others, or both, and this with or without flush, was rarely absent through the whole period of a case. In a very few instances, however, it was not discovered, and in many it was rarely so great as to be the subject of complaint. I have not thought it necessary to state numbers as to these symptoms. It may not be useless, however, to say, that I do not find chills at an advanced, or late period of the disease, to have been usually followed by very grave consequences, though I had previously had a different impression on this point. They are noted in 29 cases, and only two of these were fatal in their termination.

Involuntary dejections, or urine.—In the last 184

cases 10 are noted, in which discharges occurred in the bed, involuntarily, or at least without due notice. Six of these 10 cases terminated fatally. In the previous cases, I feel some doubt whether these points were duly attended to, and therefore I do not count them.

Retention of urine and dysury.—In six cases, the urine was retained in the bladder, so that the catheter was used one or more days. In these cases the patients could not discharge urine voluntarily, but they were not always sensible of any inconvenience from the retention. In three of these six cases the termination was fatal, and of these three, two were male and one female. In one of the three cases, not fatal, the urine was bloody. Dysury, in a troublesome degree, occurred in six cases; none of these terminated fatally. Cases, in which dysury followed vesication by cantharides, are not included in the above statement.

Headache.—This symptom was noted in the early period of almost every case, and in many was very severe; so that remedies, local bleeding especially, and sometimes venesection, were employed for its relief.

Dizziness and tinnitus aurium.—These symptoms were often noted; but I am so confident that they were not noted in all cases, where they occurred, that I will not state the number of cases, in which they were observed. They are not of bad omen, so far as our notes can decide.

Watchfulness.—This occurred in 83 cases; that is

(303÷83=3.65), in 1 case in 3.65. Of the 83 cases, 66 terminated favorably and 17 fatally. So that in the 261 favorable cases (261÷66=3.95), 1 in 3.95 was watchful. In the 42 fatal cases (42÷17=2.47), 1 in 2.47 was watchful. Among those who were watchful (83÷17=4.88), 1 in 4.88 died.

Somnolence.—This occurred at a late stage in many cases, in which watchfulness had existed previously; and both were in very different degrees in different cases. Some of those, who are noted as somnolent, were only very sleepy; others were extremely stupid, so as to be roused with difficulty, or even not to be roused at all by any efforts. Somnolence was noted in 47 cases; of which 36 were favorable and 11 fatal. So that it occurred (303÷47=6.44) in 1 case in 6.44, counting the whole; and among the favorable cases (261÷36=7.25), in 1 case in 7.25; while in the fatal cases it occurred (42÷11=3.81) in 1 case in 3.81. In the cases in which it did occur (47 ÷11=4.27), 1 in 4.27 was fatal. It is, as well as watchfulness, among the unfavorable symptoms, even when we include the cases, in which it was slight. Yet, in the greatest degree, it was not uniformly followed by a fatal result.

CASE I.

Great stupor, lasting three days, terminating favorably.

M. M., an Irish woman, was admitted at evening, Nov. 2, 1822, in a state of entire stupor. On morn-

ing of Nov. 3d, she could be roused by a loud voice, so as to open her eyes partially, but obviously did not understand any thing about her. She was constantly groaning. Her cheeks were deeply flushed, sublivid; tongue dry, teeth dry and crusted with black sordes; P. 108; temperature not unnatural; skin dry, and dirty; abdomen tumid, but not tense; no alvine dejection, nor urine since admission last evening.

From the person, who brought her to the hospital, it was learnt that she had been sick about two weeks. It was subsequently ascertained from a physician, that she had very recently lost a child with typhus, and that others, residing in the same house, had had the same disease; also that she had been in a state of squalid poverty, from misfortune. As I knew the woman many years afterwards, I can say that she was not intemperate.

The following was ordered to be taken immediately.

℞. Antimon. tart. gr. ij.
Hydr. Subm. } ā ā
Pulv. Jalap } gr. x.; M.

If no dejection in six hours, an enema. Let her have toast-water, arrow-root and oatmeal gruel.

7 o'clock, P. M. She has had three copious dejections of a brownish yellow colour; no vomiting; stupor continues; groans less constant; P. 108, more feeble; occasional cough, with expectoration of some adhesive mucus; skin dry, not hot; feet have been cold at times.

Shave and vesicate the head.

℞. Vin. Antim. Tart. f.ʒij.
Tinct. Camphor f.ʒvi.
Ammon. acetat. liq. f. ʒ ij; M.

Give half a liquid ounce in balm tea once in three hours. If she have three more dejections, give the following.

℞. Tinct. Opii. gtt. xx
Aquæ f. ʒ ss; M.

Sinapisms to feet.

On the following day, Nov. 4th, there was more sensibility, but it was not till Nov. 6th that any conversation could be held with her. Then P. 80; tongue moist; some appetite. Nov. 8th, she was decidedly convalescent, but her amendment was very slow. Her deafness continued with unusual obstinacy for a month, though lessening gradually. She was discharged well Dec. 23d.

This was the first case of continued fever admitted to the hospital. From this cause and its own peculiarities, I have a perfect recollection of it, and especially I recollect the extreme stupor and insensibility. There was, literally, no access to her mind through her senses.

Delirium.—This symptom was noted in 108 cases, of which 75 terminated favorably, and 33 fatally. The severity, and the duration, and the constancy of the delirium were very various in the cases where it occurred. It was noted, then (303÷108=2.80), in 1 case in 2.80; among the favorable cases (261÷75=3.48), in 1 case in 3.48; and in the fatal cases

(42÷33=1.27), in 1 case in 1.27. In the cases in which it was noted (108÷33=3.27), 1 case in 3.27 was fatal. It is, then, among the symptoms of bad omen; worse than either of the two preceding. It is probable that delirium occurred slightly, in the night especially, in some cases in which it was not noted.

Subsultus tendinum.—This symptom was noted in 37 cases, of which 26 terminated favorably and 11 fatally. So that it was noted (303÷37=8.18) in 1 case in 8.18; among the favorable cases (261÷26 =10.03), in 1 in 10.03; and among the fatal cases (42÷11=3.81), in 1 in 3.81. In the cases in which it was noted (37÷11=3.36), 1 in 3.36 was fatal. So that it is a symptom of as bad omen as delirium, though of much less frequent occurrence. It is probable that this symptom occurred in a slight degree, in many cases, in which it was not noted; for it is a symptom, which could not be noted, unless it occurred at the moment, when some medical man was examining the patient.

Deafness.—This was noted in 45 cases; of which 36 were favorable, and 9 fatal. Among the whole, then, it occurred (303÷45=6.73) in 1 case in 6.73; among the favorable cases (261÷36=7.25), in 1 in 7.25; and among the fatal cases (42÷9=4.66), in 1 in 4.66. In the cases where it occurred (45÷9=5), 1 in 5 proved fatal. It is, therefore, of rather less unfavorable import than either watchfulness or somnolence; and much less than delirium, or subsultus tendinum. But it cannot be called a favorable

symptom, as it has been, I believe, since the days of Hippocrates.

Rigidity of limbs.—There are 6 cases in which this symptom was noted; of these, 5 proved fatal. The following is the case in which death did not ensue.

CASE II.

Rigidity of limbs; diarrhœa, &c.; pulse not frequent; terminated favorably.

J. W., æt. 23, not married, brickmaker; was a laborer on a farm till a year ago, when he commenced his present employment. Health not firm before present sickness; especially during the summer he has been liable to "colds and dysentery." Admitted September 12, 1835. On September 3d, he first noticed his present complaints. On 1st day, pain in head, back and limbs, with cramp in legs, followed by chills and heat, obliging him to give up work. These symptoms continued and were accompanied by great lassitude and confusion of mind, dizziness, dimness of sight, nausea, costiveness and some pain in abdomen. On 8th day of the disease, cough began, not violently, with an expectoration of thin mucus, in small quantities. On 6th day, had a physician, and then took an emetic, which operated sufficiently; since then, he has had some medicine almost daily, and has had one or more alvine dejections, in consequence of the medicine, as he thinks.

September 12th, 7 P. M., on bed; countenance

and manner dull; memory slow and indistinct; cheeks a little flushed; skin cool and damp in parts exposed to the air, hot on abdomen and parts covered by clothing; tongue dry, red, fissured, with small white patches in centre; pulse 88, rather hard, not very full; respirations 22; abdomen full and tense, and somewhat tender on pressure in epigastric and hypochondriac regions; a few faint red spots on abdomen. Complains of great thirst, with a pastiness and bad taste of mouth; head feels light. Two dejections to-day, rather loose, with some pain, attributed to medicine taken this morning.

September 13th (11th day of disease). Cheeks and chin deeply red, without corresponding heat, though hot and moist; alæ nasi pinched, not playing; upper lip strongly retracted; teeth denuded, dry and covered with some sordes; lower lip cracked; gums swollen, not sore, disposed to bleed; features still; head moved with difficulty, from rigidity of muscles of neck; some rigidity of arms, hands remain as they are placed, not falling readily; skin generally red; abdomen full, not tympanitic, epigastrium especially full; very tender in left hypogastrium, a fleshy firmness in that region; he groans most on pressure over that region, yet says he is most tender about umbilicus; pupils dilated, probably large naturally; no suffusion of eyes; one dejection this morning, small, liquid; urine sufficient; red spots on abdomen; no sleep, by his report; tongue very dry, fissured, not coated; P. 84.

℞. Sodæ Carbonat. gr. v.

to be taken four times a day.

September 14.—P. 84; skin moist; face less flushed; muscles less rigid; tongue moist at edges, sticky in centre; abdomen less full, but as tender as yesterday; sudamina about neck; great dryness of throat; no sleep; 3 dejections; has coughed a little.

Eight leeches on left hypochondrium, to be followed by a poultice over the whole abdomen. Let him have ice freely to hold in his mouth. Occasionally bathe the head with cold vinegar and water. At bed time let him have the following.

℞. Spirit. Clutton. Febrifug. gtt. xxv.
Aquæ f. ʒ i. M.

September 15.—Great relief to abdomen since leeches; abdomen soft and bears pressure; tongue very moist, yet thirst continues; teeth clean, yet dry.

September 16.—Countenance as before; tongue more dry, tremulous, lobes swelled; P. 84; shows loss of flesh; while feeling pulse, his hand is gently drawn towards the body; 3 or 4 dejections by his report, more numerous by report of nurse; slept a little; there is still a tenderness in left hypochondrium; spleen felt there very distinctly.

Eight leeches to left hypochondrium, to be followed by poultice over abdomen.

September 17.—Night better, except disturbed by diarrhœa; 6 dejections; tongue sticky and more dry; spleen not felt so fully, left hypochondrium less tender, but epigastrium more full and tender; red spots very distinct, but not numerous; flush and heat less.

Let him take each dose of soda in the following,—

℞. Mist. Calc. Carbonat. f. ʒ ss.

September 18.—Very little sleep; less tenderness in abdomen; P. 72; thirst not abated.

September 19.—Night comfortable; four dejections; spleen less distinct; more fulness in epigastrium, especially at the right; sudamina about neck; countenance rather more bright; moves his head more easily, but is dizzy on motion; great weakness; no appetite; P. 72.

Let the limbs be washed night and morning with warm water and soap.

September 20.—In first part of night delirious; afterwards did very well; four dejections; tongue redder at tip, white in centre; sordes on teeth; very thirsty; sudamina quite thick about neck; abdomen less full; spleen can be felt, but much less than before.

September 21.—Tongue as before; lips strongly retracted; mouth sore at corners; lips and teeth dry; flushed; features still; still some stiffness of joints; moves head with some difficulty; P. 72; seven dejections.

May have milk.

September 22.—Rested very well; has decided appearance of mending; mouth more closed; teeth cleaner; spleen less distinct; P. 72.

May have rice with sugar, and a little cracker.

September 23.—Reports himself better and looks so; slept well; food sits well; four dejections; teeth cleaner; thirst continues, especially at night; P. 84, strong and full.

September 24.—Countenance brighter; P. 72; five dejections, small.

Toasted cracker.

September 25.—Three dejections; red spots faded; P. 72. From this time mending. On September 27th (25th day of disease), the rigidity of muscles of the neck had not quite gone; the diarrhœa ceased; more flushed, and red spots brighter; yet he was able to lie on either side instead of being on his back solely, as he had been. After that day, the amendment was steady, and he was discharged well, though his strength was not entirely reëstablished, October 10th, the 38th day of the disease.

It appears that the rigidity in the muscles of the neck was noticed, on the 11th day of the disease, and some rigidity in the arms, on the same day; this was so great that the limbs did not readily obey the laws of gravity when raised, nor were they moved voluntarily. On the 14th day, the arm was drawn toward the body by a slow, involuntary action of the muscles, when it had been moved to examine the pulse. Some rigidity remained in the limbs on the 19th day, and in the neck, as late as the 25th day.

It cannot be said, that the rigidity of the limbs was as great in this case, as in some others; yet it seemed proper to bring it into view, as so few cases have terminated favorably, where this symptom was noticed.

It may be proper to add, that this patient was not under my care; but the details, which I have copied from the original records, show that it was observed with fidelity.

It may not be useless to add another case, where rigidity of the limbs occurred with convulsions, and in which the more usual termination ensued.

CASE III.

Mild in the beginning; in fourth week cerebral symptoms urgent; rigidity of limbs; spasmodic affections; pulse not frequent; death on 28th day.

J. H. S., carpenter, Boston, æt. 40, admitted October 16th, 1835; wandering in mind, answers not definite; as well as can be ascertained he became sick about September 25th, but did not give up work till 5th inst. Before that time, diminution of strength, lassitude, headache, dimness of sight, dizziness, ringing in ears, and diarrhœa. Gave up work because his strength was exhausted, but thinks he had not any other aggravation of his symptoms; thinks he has not had any chills. From the 5th, he has kept his bed most of the time; head as before; bowels alternately loose and costive, with pain in them and in his back; some nausea; no cough; not much sleep for a few nights past. He has had some medicine, but he does not know what.

Oct. 16th (22d day of disease), 7 P. M., his state was as follows. On bed; mind wandering, yet he answers some questions; speaks as if inebriate; tongue thickly coated, pasty, white, edges red and moist; breath feverish; nausea; abdomen tender, not tympanitic; no red spots; P. 72; flushed; skin moderately warm, but he feels cold; headache.

Oct. 17th.—P. 72; tongue swollen, moist, edges not coated; no red spots, nor sudamina; no dejection; night watchful, often groaning, sighing and gaping; skin neither hot, nor cool, dry and inelastic; dull headache, pain in eye-balls; no rigidity of limbs.

℞. Ol. Ricini f.ʒij., to be given now, and repeated in four hours if no dejection. Enema afterwards, if necessary. After operation, the following every six hours.

℞. Sodæ Carbonat. gr. v.

Oct. 18.—One dejection, after two doses of oil and enema. Restless and delirious through day and night; a little sleep this morning; P. 72.

Oct. 19.—Asleep. Has been more quiet, yet watchful and talking to himself; P. 64, some subsultus tendinum; one dejection; no urine since night of 17th; flat on percussion above pubes, tumor of bladder visible; elsewhere abdomen natural; tongue as yesterday.

Catheter p. r. n.

In the two following days, he had convulsions and rigidity of muscles in arms, particularly in the left; the forearm could be extended by force, but, when the force was withdrawn, it was immediately flexed. On the 20th, there was carpologia, and on 21st, an entire loss of consciousness. The urine was passed without catheter after the 19th, but involuntarily. On 21st, he had great dysphagia and a strong contraction of the abdominal muscles, so that the ribs seemed to be projecting. The spasmodic affections subsided after the morning of the 21st, but he re-

mained unconscious, and died at 5 A. M., Oct. 22d, the 28th day of his disease.

No autopsy was permitted in this case, but the disease was unequivocal; and it is a good instance of rigidity of the limbs, followed, as usual, by death. The absence of frequency in the pulse is very rare in a fatal case. It seems to be connected with the predominant cerebral symptoms, but the two do not always go together.

In three cases, the limbs were *cataleptic;* or remained as they were placed. Only one of these cases terminated fatally.

In connection with the foregoing, I will state some other symptoms relative to the lower extremities.

In one case, there was a temporary palsy in one leg. In two cases, there was a numbness, lasting for several days. In eight cases, there was a painful state of one, or both legs, for many days, in the latter stage of the disease. Indeed, this affection may be classed among the sequelæ of this fever, as it occurred after convalescence. It was attended with more or less of lameness in motion. I have seen cases of this affection lasting several weeks, and causing much anxiety. These have been rare cases brought to me from the country. I believe that entire recovery always takes place. I do not recollect to have seen this affection described by any one.

In five cases, swelling of one leg, from well-marked phlebitis, occurred at a late period of the disease. In one of these, cystitis, or inflammation of the mucous coat of the urinary bladder, occurred also.

Cutaneous eruptions. Red, or rose spots.—Rose spots (*taches roses*) were not noticed until the year 1833. In that and the two following years they were noted in 70 cases; in some of these, however, they were very few in number. Sometimes only 3 or 4 were seen; but in a few cases they were numerous, covering the trunk, and appearing even on the limbs. In the years 1833–35, inclusive, there were 106 cases; so that (106÷70=1.51) 1 in 1.51, or about 2 in 3 had rose spots. I am not at all satisfied, however, that they did not escape notice in some cases. In these three years, 18 cases proved fatal (106÷18=5.88), or 1 in 5.88. Now in the 70, in whom rose spots were noted, 9 only proved fatal, or (70÷9=7.77) 1 in 7.77. So that if they were noted correctly, this eruption might be regarded as a favorable sign. It certainly is not unfavorable.

Sudamina.—These were noted only in 1833–35, and not perhaps in all cases even then. At any rate, they are mentioned in only 41 cases, of which 4 were fatal; making them even a more favorable sign than the rose spots; for (41÷4=10.25) only 1 case in 10.25 was fatal, where the sudamina were noted. It would appear that they occurred (106÷41=2.58) in 1 case in 2.58.

Excoriation of back.—Excoriation over, or near the sacrum, and in some cases about the hips, is noted in various cases, both those terminating favorably, and in those terminating fatally. But this is one of the symptoms, which, I feel assured, was not recorded as often as it occurred. I do not, therefore, give the number of instances, in which it was noted.

Enlargement of the spleen was discovered in various cases; some before we were aware of M. Louis's observations on this point, and many more after. But it was not a matter so carefully attended to, in every case, as to give value to our observations.

We call this disease continued fever, and rightly. But *exacerbations* are very common in it, more in some years than in others; though they do not occur in all cases. They are marked by flush, or heat, or pains, or restlessness. They vary much in severity, and may be once or twice in a day; often between 11 A. M. and 4 P. M.

Secondary diseases.—Otitis was noted in seven cases. Probably it existed in a slight degree in some cases, in which it was not noted.

In only four cases is an inflammation of the parotid gland noted, but I can hardly doubt that it occurred in more instances. In only one of the four was the event of the case fatal. In only one was there suppuration, and this was not fatal in its result.

There would seem to be only four cases, in which peritonitis occurred from perforation of the intestine. Death ensued in all of them, but they were not all examined after death.

Pneumonitis was not rare among the secondary diseases; but bronchitis was by far the most common. As this last occurred most frequently, when there was no longer any anxiety as to the result, its symptoms were noted slightly, or loosely. On this account, I do not state the number of instances in which it happened. And even the pneumonitis, when not severe, was

slightly noted; and in some cases, it was evidently masked by cerebral symptoms, as was found after death. So that I abstain, likewise, from stating the relative frequency of this disease. Both these diseases were most severe in autumn and winter; but they occurred also in summer, especially the bronchitis.

Cough is noted in 145 cases, of which 21 were fatal. In 24 of these cases, there were bloody, or rusty sputa, and of these 4 were fatal. In 45 of the others, sputa not rusty, nor bloody, were noted to attend the cough, and of these 8 were fatal. It is probable that the same sputa occurred in some other cases and were not noted. Dyspnœa was noted in 70 cases, of which 17 were fatal.

Predominance of particular symptoms.—It is well known, that, at certain periods, typhoid fever and other acute diseases are unusually severe and unusually fatal. In like manner, certain symptoms appear more frequently, or with unusual severity, at particular periods. This has attracted my notice, when engaged in practice, and was quite manifest in taking off from the hospital records the notes, on which this report is founded. I will state a few instances, derived from a hasty review of those notes.

In all the cases together, 1 in 2 had a dry tongue. In the latter part of 1828 and beginning of 1829, there were, in 11 successive cases, 9 which had this symptom. In 1831, in 15 successive cases, there were 11 with the same. In 1834, this symptom was noted in 10 of 12 successive cases. And in 1835, it was noted in 22 of 27 successive cases.

Epistaxis occurred in 1 of 4 of all the cases. In 1834, of 12 successive cases at one period, it occurred in 7, and of 14 successive cases at another, it occurred in 10; making 17 in 26; that is, in nearly 2 out of 3.

In 1834, the whole number of cases was 34. Among these, watchfulness was noted in 15, or rather less than half. The proportion in the whole number of cases was 1 in 3.65. But these 15 cases were not scattered through the year; for five of them were the first 5 cases in the year, and seven of them were in 10 successive cases near the end of the year.

In 1835, the whole number of cases was 35. Among these, watchfulness was noted in 17 cases, very nearly half. But 5 of the 17 occurred in 6 successive cases; and 8 occurred in the 10 last cases of the year; so that in these 16 cases, there occurred 13 of the 17 cases, which belonged to the whole year.

In 1833, on the other hand, I find two instances, in each of which, this symptom was absent in seven successive cases.

Deafness occurred in 1 case in 6.73. In 1833, in 8 successive cases, 7 were attended by deafness. It occurred in only 5 other cases in that year, though the whole number was 37.

In 1829, there were 25 cases, of which one only occurred in January and was fatal. This belonged to the year preceding; I mean that it might be supposed to have its character from that of the autumn of 1828. The first of the other 24 cases was admit-

ted in the spring. None of these twenty-four were fatal. Among them cerebral symptoms appeared much less than in the average of all the cases. Thus watchfulness was noted in seven; delirium in four; somnolence and subsultus tendinum each in one. On looking back, it will be seen that, except the watchfulness, all these symptoms were in much less proportion than in the whole number of cases, and even than in all the favorable cases. In the one fatal case in 1829, somnolence and delirium were noted, the last being unusually severe. I think proper to add, though I can make no inference from the statement, that in 1829, headache is noted as unusually severe in a large proportion of cases; that is, in thirteen of the twenty-four cases. The only case in the year, in which it was not noted, was the fatal case. This is readily explained, when it is added that the case was marked by stupor and great delirium, which prevented a knowledge of the patient's sensations after his admission, as well as of their history previously.

In looking over those years, in which the symptoms were most accurately noticed, I do not find the headache marked as unusually severe in any proportion near to that above stated. The greatest proportion in any other year, is nearly one case in four.

To the foregoing remarks, I will add only that in 1827, chills were very frequently noticed during the progress of the disease; and that in 1830, the exacerbations of fever were unusually severe in many instances, giving the disease a remittent character.

Relapses.—In cases of measles, small pox, and other diseases, dependent on specific morbid poisons, we never see a relapse of the disease. The small pox, having run its course, will not appear again, whatever imprudence the patient is guilty of during convalescence. I think it is not so with typhoid fever. An error in diet and regimen is often followed by a new train of symptoms, after convalescence from this disease; and these appear to me to be such as belong to this fever. It is, however, true that they are not always so strongly characteristic, as to leave no doubt on the subject. If, however, they are carefully noted, they will not be found to accord with any other disease. I hope by these remarks to call such exact attention to the subject, as may decide this point hereafter. The following case is one, which seems to me to support the opinion, that I have advanced. The red, or rose spots, after the relapse had occurred, may be regarded as of value in the absence of other well-marked signs.

CASE IV.

Admitted on 53d day; had been convalescent at end of the sixth week; relapsed after error in diet; some rose spots on 62d day; pain and numbness in feet; again convalescent in tenth week.

J. M., æt. 22, laborer, Boston, admitted February 6, 1834. Has enjoyed good health until the present disease. Has been unwell since Dec. 16th, now

53d day. He was seized at first with pain in head, trunk and extremities, accompanied by chills, heat, &c. He does not recollect how long these symptoms lasted. From his account, he was actively treated, and he has been convalescent; he says that, for eight or ten days, he had no trouble except weakness; that last week he was gaining, and felt stronger than he now does; that his appetite was good. At that time he took some milk with a quantity of soda crackers, and has had no appetite since. He thinks he has slept very little, having been annoyed by pain and numbness in his feet.

February 6, 5 P. M., his state was as follows: Tongue moist; sordes on teeth; no dejection for two days; some soreness at hypogastrium; P. 104; countenance flushed, but languid; skin dry; sight and hearing good; mind slow, otherwise natural.

February 7.—Tongue denuded except at root, red, dried except on sides; abdomen not tense, but tender in every part on pressure, and he thinks it has been so for ten days; one dejection of good color, not offensive; P. 104; rather hard; countenance sallow, a little flushed; temperature natural; pain and numbness in feet continue, though diminished.

Liquid farinaceous diet;—some of it to be seasoned with wine, if agreeable to him.

To the 13th of February, he grew more sick; for two or three days had nausea and some vomiting with extreme thirst; watchful in the night with heat; pain in stomach, and tenderness in abdomen; this last much relieved by leeches on the 8th of February;

tongue more moist from February 9th; P. 92 to 100, intermittent on 11th and 12th February; took cider on those two days, and also on 13th, but then incommoded by it; bowels kept open by enemata.

February 14th and 15th, he was mending somewhat; P. 96; a few red or rose spots on 15th; same day some appetite, and on his request he had some hasty pudding and molasses.

Previous to 16th February he had had a slight cough, or rather a frequent hemming with some mucous sputa; that day the cough increased, and it was annoying for several days afterwards.

Feburary 17th, his appetite increased, and he began to eat a little bread; on 19th and 20th hunger was strong, and he added potato and butter with benefit. Till February 21st, his pulse continued at 96; on that day, 72. His amendment continued from this time, but he had been so reduced in flesh and strength, that it was long before he was well reëstablished in health. The feet were more or less painful and numb for three weeks; and the pulse quite peculiar, often intermitting and very irregular, varying suddenly from 60 to 120, but not always in the same proportion; accelerated very much by motion; at a late period 44 to 48, but then rising suddenly to 96 and 108.

He was at last well confirmed in convalescence and discharged well, March 21st, the 96th day of his disease by his account.

While at the hospital, the treatment was very mild; besides the leeches and the enemata, he had

some opiates for his cough; and at a late period the sulphate of quinine was tried, but was soon omitted, from an opinion that it did not agree well with him. I could add two or three other cases, of the same *general* character.

Contagion. — The question frequently arises, whether this disease is contagious; in other words, whether it can be communicated from one, who has it, to one who is in health, or who is free from this disease at least.

If I were to answer from general experience, I should say that instances occur, in which there is much in favor of the affirmative; but that in the great, very great majority of instances, there is not any such evidence. At times, the typhoid fever extends through every part of a town, or city; at other times, it is limited to a district more or less narrow; and at others, it will be found limited to a few families in a city, these families being widely separated from each other. In only one instance have I ever known this family disease occur twice in the same house, and then it was in the same family. It was in a very old house, being the memorable house recently taken down, which was said to have been built by the celebrated Sir Henry Vane. I have, however, known this *family fever* occur in the most cleanly houses, and once in a perfectly new house, into which a very respectable family of the most cleanly habits moved in the autumn; having spent the summer in the country, and in good health. In this instance one of the family, a boy, resided at his

grandfather's in a distant part of the town, but was at his father's house very often. He had the disease at his grandfather's and literally died in his grandmother's arms. Yet none of the grandfather's family had the disease. I have already referred to this subject in part.

But what evidence do the hospital cases afford on this subject? I may say, that occasionally, our patients stated that they came from families, where the disease existed, and in a very few instances, they had been nursing the sick. As to our hospital nurses and servants, I have collected all the cases, in which they had the disease. It should be noted, first, that none of these were old, rarely one above forty, most of them under 30; and that among them, being usually from 20 to 25 in number, there were frequent changes. Thus in 12 years there have been many of them, probably 200. Also, they were often fresh from the country. They were therefore fair subjects for the disease.

In our 303 cases, 20 were nurses, or servants of the hospital, residing in it. Except the nurses, however, they had not much intercourse with the sick. One was in 1824; one in 1827; one in 1828; five were in 1829; six in 1831; three in 1832; one in 1833; one in 1834; and one in 1835.

It is first to be remarked, that the number of inmates of the hospital, affected with the disease, did not bear any proportion to the numbers admitted with it, in the several years respectively. Nor did they occur most in the years, when the disease was

most severe. It was in 1833 that the disease was most severe in its character, and only one of the inmates had it that year. In 1829, it was the most mild, and in that year five of the inmates of the hospital had it. It would be very difficult to trace out the particular chances for exposure in each case. But in regard to four of those in 1831 the circumstances are so peculiar, as to merit a particular statement.

In 1831, the first patient was admitted in January, the second in May. This last was not a severe case; the patient was convalescent on the 21st day, and was discharged well on the 31st day of the disease, viz., on the 9th of June. No other case was admitted before four of the hospital inmates were taken sick with the fever. These were admitted to the wards from June 29th to July 5th, and on July 26th a fifth was admitted. Although admitted on different days, three of the first four were taken sick on the 25th and 26th of June, the fourth on the 2d of July; and the fifth on the 24th of July. In the first week of July there were admitted two patients with the same disease, from abroad; these were persons, who had not had any connection with the hospital; they were taken sick on the 22d and 26th of June.

It is difficult to persuade one's self, that in these instances, occurring when the hospital was so free from the disease, contagion had any influence.

It should be added, that our hospital pupils have not been more frequently affected with the disease, than others of the same age. Of course, this statement

is not founded on an exact comparison; it would be difficult to do this; but I am quite satisfied of its accuracy.

Pathological anatomy.—In a large proportion of the fatal cases, examinations were made after death. But it was not till Oct., 1833, that the intestines were examined in a proper manner. Indeed, they were most frequently left unopened before that year; but, where they were examined, the diseased appearances in the patches of Peyer's glands were noted. In all the cases, from Oct., 1833, to the end of 1835, in which those, who died of the disease under consideration, were examined, the appearances were such as M. Louis has described. The number of cases, examined in this period, was eleven. The following cases are given, as exhibiting the most common varieties. In one of them a perforation of the intestines had occurred. There was another similar case in the same year, as shown by symptoms during life, and by the examination after death.

CASE V.

Symptoms not severe at first; but on admission, 15th day, cerebral symptoms quite severe; slight rigidity of limbs; meteorism; P. very frequent; some signs of pneumonitis; death on 18th day. Peyer's glands diseased, not ulcerated; spleen enlarged, &c.

H. S., æt. 23, bar-keeper at a tavern; admitted Sept. 24, 1835. He was delirious when he entered

and could give no account of himself: but the following was learnt from the physician who had attended him since the 15th inst. He was taken sick about the 10th Sept., when he had lassitude, anorexy, and other symptoms belonging to the early stage of typhoid fever. Sept. 15th, he had nausea, tongue coated, no pain, P. not morbid. He then had an emetic, and vomited much bile. Sept. 16th, he had Ol. Ric. f. ʒ ss; that day thought himself so well that he was on his feet. Sept. 17th, severe pain along the false ribs just left of the epigastrium, for which he had three leeches with relief. Sept. 19th, headache, heat, and diarrhœa; for which he had some opiates. Sept. 20th, some cough, but no physical signs of disease in chest. Sept. 21st, slight delirium, tongue dry and cracked. These symptoms continued till his admission to the hospital.

September 24.—His state was as follows. Tongue dry, cracked, and scaly, with red edges; teeth very foul; abdomen full, tense and tender; no red spots; P. 144; quite warm, except feet; countenance pale, without expression; eyes continually wandering, pupils much dilated, not influenced by light; mouth half open; articulates with difficulty; talks much, incoherently; in constant motion, endeavors to rise, seems apprehensive of some evil; throws off the bedclothes; arms remain fixed, when flexed; occasional cough.

September 25.—No sleep; tongue quite dry and crusty; one sputum in cup, rusty and foul; one dejection, involuntary; P. 120; eyes suffused, as if bruised; some subsultus tendinum; no sudamina.

September 26.—Four dejections, involuntary: P. 132; is more manageable: countenance rather better, less sunken; skin moist: sudamina well marked on abdomen.

September 27th. Perfectly unconscious since 4 P. M. yesterday: countenance much sunken: much subsultus tendinum; hands livid; sudamina very numerous. Died before noon.

AUTOPSY—TWENTY-TWO HOURS AFTER DEATH.

Exterior.—Very rigid. Lividity on back of thorax. Sudamina on each side of neck. Abdomen moderately full. Muscles firm, dark red, dryish.

Head.—Brain rather firm: slight serous effusion in pia mater.

Thorax.—*Pleurae* healthy. No adhesions. *Lungs* healthy, except some serous congestion of upper lobe. *Pericardium:* average quantity of fluid, darker than natural. *Heart* rather flaccid; blood in very moderate quantity, quite liquid, except for some greenish fibrin in right ventricle.

Abdomen.—*Stomach* not contracted, contained several ounces of green, rather thick fluid. Mucous membrane, towards cardiac orifice, of a deep red, but sufficiently healthy as to thickness and consistence. In it, but not penetrating its substance, are five or six narrow superficial ulcerations, about one-third of an inch in length. Mucous membrane, elsewhere, of natural color; somewhat mamelonated towards pylorus.

Small intestine: not contracted; contained a con-

siderable quantity of mucus and healthy secretions, except about two feet near middle of ileum, where it was deeply stained with blood. Throughout last nine feet, Peyer's glands in a state of acute disease; about 26 being counted. The disease increases progressively towards cœcum; it consists of a very remarkable, well defined, and uniform thickening, and such a degree of softness, that the surface, to some depth, may be scraped off like a pulp. Many of these patches immediately surrounded by a red line, but generally they are of a light red color, contrasting with the deep red of the intervening mucous membrane. No ulceration: but numerous opaque, whitish, very minute points in the softened portions. Numerous patches, by estimate, 2 inches in length, and one, near the cœcal valve, perhaps 5 or 6: some not more than one-third or one-half an inch in breadth. Throughout rest of intestine, the patches quite distinct and healthy; a few of them, however, appearing to be softened before becoming otherwise diseased. Brunner's glands, also, in last nine feet of intestine, very numerous, and, in some cases, so much enlarged, that it was often difficult to distinguish them from the small irregular patches of Peyer, and becoming more and more affected towards valve. Mucous membrane, generally, throughout intestine, well, except for the deep redness in lower portion.

Large intestine.—Moderate distention from gas. Considerable quantity of healthy, liquid fæces. Brunner's glands, numerous and enlarged: mouths patulous and in many apparently ulcerated. Just

within cœcal valve are two ulcers, about one third of an inch in diameter, dark colored, penetrating to muscular coat, edges red. Mucous membrane generally appears well. *Mesenteric* glands, corresponding to the diseased Peyer's glands, enlarged, red, soft, and much infiltrated with serum, so as to break down easily under pressure, but not containing pus. Those in the mesocolon somewhat in same state; the rest healthy. *Liver* healthy. Gall bladder; average quantity of bile, yellowish, quite liquid. *Spleen*: length 7 inches: breadth 5 inches: thickness 2½ inches. It breaks down readily under pressure. Color very deep red. Pancreas, kidneys, and bladder healthy. Bladder containing 5 or 6 ounces sufficiently healthy urine.

CASE VI.

Cerebral symptoms predominant after 2d week; pulse not frequent; after some appearance of convalescence for six or seven days, on the 32d day, symptoms of perforation of intestine and consequent peritonitis; confirmed by examination post mortem.

H. G., æt. 22, carpenter, Boston, not married; has generally had good health, and has been well through the summer. Admitted September 14th, 1835. Has been sick, so as not to work since 3d instant; and, for a few days before that, thinks he had vertigo, noises in ears and dimness of sight. On the 3d inst. severe headache, pain in back and limbs, and great

heat, but no chills; he was then costive in bowels. Headache continued three or four days, and since then, he has had much dizziness, and his mind has been much bewildered; also slight cough, but no expectoration. He was bled early in sickness, and has taken some medicine, but he does not know what, and has had two dejections daily, as he thinks.

At 7 P. M. September 14 (12th day of the disease), on bed; countenance dull, face flushed, mouth open, teeth dry with sordes, eyes half closed; manner slow, and memory imperfect; hearing very imperfect (not so in health); head dizzy; skin hot, not moist; tongue very dry, red at tip and edges, with thick white coat in middle; very thirsty; throat sore and parched; P. 84, not hard, not full; abdomen very tense, not full, tympanitic, quite tender on pressure, especially in upper part; some faint red spots on abdomen; one dejection to-day, very small, with a little pain.

September 15.—P. 80; T. yellowish brown at centre, edges dry and red, tip scaly; meteorism of abdomen; very tender there on pressure.

Hyd. Submur. gr. iv. to be given at once, and to be followed by Ol. Ricin. f. ʒ ss. Enema at evening if no free dejection. Afterwards Sodæ Carbonat. gr. v. once in six hours.

September 16.—Countenance as before, perhaps a little brighter; P. 84; less deaf; four dejections since the oil, the first two very copious, all liquid; rested well in night; tenderness in left hypochondrium.

Eight leeches on left hypochondrium, and poultice afterwards.

September 17.—More flushed, especially red on nose and chin; P. 83; T. very dry; less tender in abdomen; four dejections; thirst not constant; asks for milk.

Milk and water occasionally for drink.

September 18.—In day, tolerably comfortable, some delirium in night; now asleep; P. 72; deeply flushed, especially on nose; skin cool where exposed; covered by three or four blankets by his own choice; on waking, pupils much contracted, eyes suffused; speaks as if intoxicated; meteorism rather less.

September 19.—Less flushed, face less turgid, eyes very heavy; P. 72, double beat very distinct; red spots very distinct; left hypochondrium more full than right; three dejections; T. less dry; teeth dry; lips cracking; slept well, a little delirium in evening.

September 20.—Says he is not so well, but makes no distinct complaint; slept well, or was stupid in night; more somnolent; trembles much when he rises in bed; P. 72; T. very dry; more flushed; not tender in abdomen when pressed.

Omit carbonate of soda.

℞. Potass. Nitrat. gr. iv. to be given in water once in four hours, unless diarrhœa urgent.

To the end of the fourth week of his disease, September 30th, he remained without great changes; generally there was an increase in the cerebral symptoms, rather more delirium, on 26th September especially; some subsultus tendinum, tremor of hands, strabismus on 24th September; after this, dejections

and urine involuntary; diarrhœa nearly the same or rather increasing; red spots very distinct, September 30th (28th of disease); P. varying from seventy-two to ninety-six. September 28th, a few rusty sputa, yet otherwise better that day; T. more moist and cleaner, posture more natural, countenance brighter. There was a desquamation over the forehead and nose, which had been particularly red on September 27th; and this had extended to the breast, and was on the hands also October 1st. October 3d, epistaxis was noted, and the next day a black slough over sacrum. From September 28th to October 4th, there had been some appearance of convalescence, though not very strongly marked; the tongue had been getting cleaner, the delirium and subsultus less.

At 2 P. M., October 4th, he had a severe rigor, and appeared to be in pain; his answers were incoherent; and on pressure over the abdomen, he shrunk very much. The rigor passed off within an hour, and was followed by flush, heat and sweat with P. 120. Before this, not more than 96. Before evening, he had an involuntary dejection. He sunk through the night, and died at 5 A. M., October 5th.

AUTOPSY—FOUR HOURS AFTER DEATH.

Exterior.—Some emaciation and some rigidity. Depending parts livid. Slough on sacrum as before.

Abdomen moderately full. Numerous sudamina on surface, very large and transparent: none on neck, nor on thorax.

Head.—Some serous effusion in cavity of arachnoid, some in pia mater over upper and back part of hemispheres, and a large quantity at base of brain. Longitudinal sinus and veins of pia mater moderately full of blood. Glands of Pacchioni very large. Brain firm. Bloody points rather numerous. Quantity of serum in lateral ventricles more than usual. Two or three small serous cysts in plexus choroides. This cavity not examined until an hour after thorax.

Thorax.—Left pleura healthy. Right contained about five ounces of serum, and a portion of recent lymph hanging from lower lobe. Some redness on diaphragm.

Lungs.—Both lower lobes engorged, friable, and showing throughout, on the cut surfaces, dark red, almost ecchymosed spots: otherwise healthy: so also the epiglottis, larynx and trachea. *Pericardium* contained 1½ ounces serum. *Heart* healthy. Considerable quantity of fibrin in right ventricle. Blood otherwise, dark colored and liquid, but not unusually so.

Abdomen.—*Peritoneum* almost every where showed marks of acute inflammation. Cavity contained thirty-eight ounces of limpid serum. *Small intestine* glued together by thin interposed layers of light colored, recent lymph, most abundant towards right side, where also was effused much of the contents of the intestine. A large quantity of lymph on convex surface of liver, and corresponding surface of diaphragm. None on stomach except to-

wards small curvature, and generally none on the small intestine opposite mesentery, though there was considerable redness of the surface. *Stomach* distended with flatus, contained about four ounces of bright yellow, rather thick liquid. Mucous membrane healthy. *Small intestine* not contracted: contained much light yellow, thin fluid in upper part, and a considerable quantity of a soft solid matter, light yellow, looking like curdled milk partly digested: such as this it was which was found in the peritoneal cavity. *Peyer's glands* diseased, but not so remarkably diseased towards termination of ileum, as is often the case. About seventeen counted, in a state of ulceration. Ulcers average two or three lines in diameter, well defined, edges red and considerably raised, from thickening of the subjacent cellular coat: muscular fibres generally exposed. One of the ulcers had penetrated through the peritoneum. It was situated 7½ feet from the cœcum, more than half an inch long, from one to two lines broad, and ran transversely to the course of the intestine. The perforation was circular, about 1½ lines in diameter, edges very sharp, and peritoneal surface, for some distance around, covered with lymph. Some of the patches were quite healthy, except for the ulceration: but, generally, they were more or less irregularly thickened, red and softened. Many other smaller ulcerations were found, not in Peyer's glands, being generally more superficial, much less thickened, the edges of some very dark, almost black: a few, how-

ever, were more recent, of a bright red color, and considerably thickened. One of these, the first ulcer met with, was situated twelve feet from the pylorus. *Brunner's glands* visible throughout last eight feet of this intestine, especially numerous towards cœcum, where they were transparent, and about the size of a turnip seed. Mucous membrane, generally, sufficiently healthy, and Peyer's glands, in upper part of intestine, quite so. *Mesenteric glands* opposite lower end of ileum greatly diseased. Several as large as a filbert, soft, of a mixed whitish and deep red color externally, and being cut through, were found to be extensively suppurated. Those corresponding to upper part of canal gradually became healthy.

Large intestine.—Much contracted: contained a very little healthy excrement. Five or six small, dark colored ulcers in cœcum, most of them not thickened, quite superficial: but two or three penetrated to muscular coat; mucous membrane otherwise well. *Liver* rather friable: bile abundant, quite thin. *Pancreas* healthy. *Spleen* 6 inches long, 4½ broad, soft and of a deep red color. *Kidneys* dark colored, congested and rather friable. *Bladder* not contracted; many small red spots on inner surface toward neck; contained about eight ounces of urine.

CASE VII.

Typhoid fever with pneumonitis admitted at the end of the sixth week; fatal in the eighth. Diagnosis confirmed by examination post mortem.

McD., æt. twenty-six, laborer, an Irishman, was admitted August 22, 1834. By his imperfect account he was taken sick six weeks ago. He was then at sea and was attending some passengers, who were sick. At first cough, chills, heat and sweat, with much prostration, but with little pain; these symptoms have continued, keeping him in bed from the first; diarrhœa in the early part, but not of late; he thinks he has been mending of late.

When admitted, his state was as follows: Tongue coated, rather dry, but cleaning at edges; no dejection since yesterday; abdomen not tender; several red spots; has just now vomited a green liquid; P. 120, rather hard, not very small; skin moist; temperature natural; eyes heavy; coughs often;—chest resounds well anteriorly; some flatness below scapulæ; respiration audible anteriorly, not purely vesicular; some sonorous rale in left breast; on back, below right scapula crepitous rale, below left scapula bronchial respiration.

Enema.

August 23, P. 96, small, not hard; skin cooler than natural; lips sublivid; respiration long and deep; no thirst.

To August 28th (the end of 7th week by his account), sleepy and stupid for the most part; at times

active delirium, yet he could be roused to answer questions; P. 108 to 120, with double beat; cough loud and strong, sometimes annoying, without expectoration, though with a sound of loose mucus in throat; brighter and some relief to cough after leeches on temple, August 25th; tongue dry and crusted; bowels kept open by medicine and injections; countenance getting yellow, or sallow.

August 29th, dejections and urine involuntary; tongue moist for the first time and swollen.

August 30th, tongue black; P. 132. August 31, P. 136; more awake, yet not noticing objects about him. At 4 P. M., stupor increased. September 1st, evidently sinking. Died at 5 P. M.

Besides the enemata and leeches which have been mentioned, he had Pil. Scill. C. night and morning, August 22d, and Pil. Hydr. Subm. C. night and morning, 23d and 24th. Also was vesicated on the neck, August 29th.

AUTOPSY.

Lungs.—Lower left lobe in first stage of inflammation.

Small intestine.—Ulcerations large and frequent; twenty-five counted; edges much elevated, for most part round; penetrating in some places to peritoneum. About six inches above valve, a patch of Peyer's glands deeply ulcerated. Valve of cœcum very much swollen; one large ulcer near it. Mucous membrane, for space of six inches above this part, thickened. *Mesenteric glands* much enlarged, very hard and red. Brunner's glands much developed.

Liver.—Very hard, firm. Stomach much thickened and corrugated. Mucous membrane thickened and soft. Some fluid in peritoneal cavity. Spleen very large; three times its natural size. Firm externally, but, being cut into, of the color and consistence of cranberry jelly.

The early history might leave a doubt as to the diagnosis; I mean the written history. But if every thing had been recorded, which was seen, there would not probably be any doubt. The subsequent course of the disease, and the appearances post mortem, remove all doubt in the case. It is to be regretted, that the appearances post mortem are not more fully and exactly detailed.

Effects of remedies.—It might be fairly anticipated that the period of the disease, at which remedies are employed, would have a great influence on the results. The anticipation is confirmed by experience. In stating the effects of remedies, therefore, I shall mention, first, those who entered the hospital the first week of the disease, and to whom medicine was first administered in that week. I shall not distinguish those, in whom the treatment was commenced before admission to the hospital. It will be enough to say, generally, that in those the benefit was decidedly less, *cæteris paribus*, than in those, who were treated solely in the hospital. This is in accordance with what has been before stated; and shows that the care, which was taken of patients in the hospital, independent of medicine, was conducive both to safety and to early recovery.

It is impossible to decide positively, from these cases, the effect of any one remedy; because in almost all cases various remedies were used. These were directed with reference to the violence of the disease, or to that of particular symptoms. When, therefore, the results are stated in cases, where emetics, or mercurials, or any other remedies were employed, it will be understood, that these were not the only remedies, and that, except in the particulars stated, the cases were treated variously. Yet by taking, for instance, all the cases, where emetics were employed, some judgment of their influence may be formed.

Emetics.—There were 90 patients, who entered in the first week of the disease; of these 59 took emetics in that week, among whom four died, *i. e.*, 1 in 14.75; and 31 did not take emetics that week; of these last, 3 died, or 1 in 10.33.

Among those who entered the first week, then, 7 died, and 83 recovered. Among these 83 the average day of convalescence was the 17.42 day; in the 55 who took emetics and recovered, the average day was 17.29; and in the 28 who did not take emetics and recovered, the average day was 17.67. Hence, it appears that there was not any material advantage as to the period of convalescence in those who took emetics. But the favorable effect on the fatality of the disease was much more marked. If, however, we look more closely to the cases under consideration, we find reason to believe that an emetic, on either of the first three days of the disease, is much

more beneficial than if taken on either of the four following days, for it appears that 32 took emetics on the first three days (9 on the first, 10 on the second, and 13 on the third), of whom one only died; and that the average day of convalescence, in the 31 who recovered, was 15.61. And there was a regular progress in this; for among those who took an emetic on the first day of disease, the average day of convalescence was 14.66; for those on the second, it was 15.32; for those on the third, it was 16.46. On the other hand, there were 27 who took emetics on the fourth, fifth, sixth, and seventh days of the disease, and entered the first week; of these 3 died, or 1 in 9; and of the 24 who recovered, the average day of convalescence was 19.45. It should be observed here, that the emetics were taken before entering the hospital, in 24 of the 32, who took them on the first three days; and that 17 of these 32 entered on the last four days of the week; so that, in these respects, they had not the fullest share of careful attention. Of the 27, who took emetics on the last four days of the week, 15 took them before admission. All of them (the 27) entered on the last four days of the week. The three who died, were among the 15 who took emetics before entering the hospital.

One hundred and thirty-nine patients entered in the second week of the disease. Of these, 91 took emetics, either before, or after admission. In the whole number, 16 died, or (139÷16=8.68) 1 in 8.68. Of those who took emetics, 9 died, or (91÷9=10.11) 1 in 10.11. There were 48 who did not take emetics;

and of these, 7 died, or (48÷7=6.85) 1 in 6.85. The difference in this case is somewhat greater than between those who did, and those who did not take emetics in the first week.

Among those, who entered the second week and recovered (139—16=123), the average day of convalescence was 21.21. Of these, 82 took emetics and recovered, and among these the average day of convalescence was 21.41; and 41 did not take emetics, among whom the average day of convalescence was 20.85. So that among those, who entered the second week and recovered, the convalescence was later, where emetics were administered, than where they were not.

In the first two weeks together, 150 entered and took emetics; of these 13 died, or 1 in 11.53. In the same time 80 entered and did not take emetics; of these 10 died, or 1 in 8.

In the years 1822 to 1831 inclusive, emetics were used much more frequently than afterwards, particularly in the second week. In 1822 to 1831, there were 174 cases; in 1832 to 1835, there were 129 cases. Now in the first period, there were 32, who had emetics, of those admitted the first week of disease, and 60 of those admitted the second week. In the last period, there were 27, who had emetics of the first week and 31 of the second week. In the first period, there were 20 fatal cases, or (174÷20=8.7) 1 in 8.7; and in the second period, there were 22 deaths, or (129÷22=5.8) 1 in 5.8.

It must be noted, however, that other active rem-

edies, as well as emetics, were used much less frequently in the last period than in the first, except only antimonials. It will be seen that these did not add to the number of fatal cases; but, as far as the evidence goes, that they lessened this number.

Cathartics.—In almost every case, cathartics were administered, both at an early period and afterwards. In the very few cases where they were not used, there were peculiar circumstances influencing the practice; so that no just inference can be drawn from a comparison of the cases, in which they were, and of those where they were not used.

Blood-letting.—Venesection, cupping and leeches were employed in many cases; but always with reference to particular symptoms, and not as remedies for the disease independent of the predominance of certain symptoms. Venesection, especially, was not employed, or very rarely employed, except when the case appeared hazardous from the general violence of the symptoms, or from some local affection.

Venesection was practised in the first week in 27 cases among those, who entered that week; and 6 of these cases proved fatal, or (27÷6=4.50) 1 in 4.50. It was rarely repeated, and the quantity of blood taken was usually a pint, being from 12 to 24 ounces; but most commonly 14, 16, or 18 ounces. In 13 of these 27 cases, local bleeding, by cupping, or leeches, was also employed. Of the 6, who died, 1 entered on the 3d day, 3 on the 5th, 1 on the 6th, and 1 on the 7th day. Of the 21, who recovered, 2 entered the 1st day, 1 on the 2d, 2 on the 3d, 3 on the 4th,

3 on the 5th, 7 on the 6th, and 3 on the 7th day. Of the whole number of patients (303÷27=11.54), 1 in 11.54 was bled by venesection. There were 13 patients who were cupped, or leeched, but in whom a vein was not opened. Of these none died. Of the 34, who were bled in some way, and recovered, the average day of convalescence was 18.38. Of the 21, in whom a vein was opened, and who recovered, the average day of convalescence was 19.19. But as all the cases, in which bleeding was employed, were picked cases, no fair inference can be formed by comparing the results with the other cases.

Among those, who entered the 2d week, venesection was practised in 22 cases, of which 5 proved fatal, or (22÷5=4.40) 1 in 4.40. This is almost the same proportion as in those of the 1st week. Among the same, local bleeding only was employed in 40; of these 4 died, or (40÷4=10) 1 in 10. Of the whole, bled in any way, viz., 62, 9 died; or (62÷9=6.88) 1 in 6.88. The average day of convalescence in all, who were bled in any way and recovered, was 21.24. This was more than 3 days later than in those, who entered the first week, but otherwise similarly treated.

If this statement appear, at first sight, unfavorable to venesection, it must be remembered that the cases, in which that was practised were uniformly of a bad character.

Mercurials used efficiently.—Mercurials, almost solely the submuriate of mercury, were used in a large proportion of all the cases. They were used

sometimes in combination with emetics, and very frequently with cathartics. Likewise they were given in small doses in some cases, but from some change in the state of disease, or from some inconvenient effect of the medicine, they were soon discontinued, and that before they had produced any marked effect on the general system. In such cases the mercurials were not considered as having been used efficiently. The cases, in which they were considered as having been so used, were those, in which the mouth was made sore, or in which there was other reason to believe the system had been affected, or in which at least, the mercurials had been used long enough to have had an effect. In the very great majority of these cases, the sore mouth was the test of the efficient use of the remedy.

Among those, who entered the 1st week, 18 used mercurials efficiently; of these 14 had sore mouths and 4 had not. Thus, as the whole number, who entered the 1st week of the disease, was 90 (90÷18=5), 1 in 5 used mercurials efficiently. Of the 18 above described, 3 died, or 1 in 6. Of those, who had sore mouths (14), 2 died, or 1 in 7. Of those, who had not sore mouths (4), 1 died, or 1 in 4. The average day of convalescence was, in all of the 18 who recovered (15), 19.60; in those, whose mouths were sore (12), 19.41; in those, whose mouths were not sore (3), 20.33.

Among those, who entered the 2d week, 37 used mercurials efficiently; as the whole number who entered that week was 139 (139÷37=3.75), 1 in

3.75 used mercurials efficiently. Of the 37 above described, 4 died, or 1 in 9.25. The average day of convalescence, in the 33 who recovered, was 20.72. All these 37 cases, except one, occurred before the year 1831.

The result, as to those of the first week, is less favorable than in the whole number, both as to fatality and as to the period of convalescence; as to those of the second week, it is more favorable in both respects. If we recollect that in the mildest cases, mercurials were less used, we may infer that probably they had no great influence on the results.

Antimonials used efficiently.—Among those who entered in the 1st week of the disease (90), 20 used antimonials efficiently, and all recovered. In them the average day of convalescence was 19.10; while the average day of convalescence in all who recovered was 17.42. So that if the medicine had some effect in preventing a fatal termination, as this limited experiment would seem to show, it had not any in hastening convalescence.

Among those, who entered the second week (139), 22 took antimonials efficiently; of these, two died, or (22÷2=11), 1 in 11. In the 20 who recovered, the average day of convalescence was 21.30; while the average day of all, who recovered (123), among those who entered the 2d week, was 21.21. Here again the fatality was less among those, who used the antimonials, than with others; but the period of convalescence was a very little later. Those of the first and second week together, who used antimonials

in 1822 to 1831 inclusive, were twenty in number, being 1 in 8.70 of all who entered in those weeks; those who used the same in 1832 to 1835, were 22, or 1 in 5.86 of all who entered in the first two weeks. Thus, then, antimonials were used more frequently during the years of the greatest fatality, than during those of the least fatality. Yet in 42 who used them, only 2 died, or 1 in 22; while the deaths in those who did not use them, among those of the same weeks, were in the proportion of 1 in less than 9.

But perhaps this would lead to too favorable an opinion of the benefit of antimony. For the cases in which it was used were picked cases. That is, they were not, on the one hand, very mild cases; but, on the other, they were not, generally, those which presented the most formidable features, such as severe cerebral symptoms.

Here is another view of the effect of remedies. I find that of all (90), who entered in the first week of disease, 27 (nearly one third) were convalescent on the 14th day or earlier; viz., from the 4th to the 14th day, and on an average a little short of the 10th day. All of these were treated early and actively. For, first, the treatment was commenced in five on the first day of the disease, in nine on the second, in seven on the third, in two on the fourth, in three on the fifth, and in one on the sixth day. Second, in fifteen cases, the treatment commenced with an emetic, and in four others an emetic was given after a cathartic; in twelve cases the treatment commenced with an active cathartic, and in the

other fifteen cases a cathartic was given after the emetic, and at an early day. In six cases, venesection was performed at an early day, *i. e.*, from the 1st to the 4th day of the disease.

This statement of selected cases is not full evidence of the benefit of active treatment at an early period; but it surely is not without much weight. At least, it shows that none were convalescent very early, who were not treated actively at an early period.

There would not be any advantage in stating the treatment of those, who entered in the 3d week of the disease and later. In some of these, the treatment was commenced early, and was judicious; but the circumstances, under which the patients were placed, were so unfavorable until a late period of disease, that the benefit of the medicinal remedies was counteracted. In some the treatment was very injudicious, and in some there was not any medical treatment. Empirical remedies were used in a few cases with decided injury, when those were of a violent kind.

Opium was used in a large proportion of all the cases, but in very various doses. It was used to check diarrhœa and cough, to procure sleep and to alleviate pain. It would not be possible, however, to estimate its effects with any fairness, without going into the details of very many cases. That it was often beneficial, I have no doubt; but this was principally when given in small doses.

Somewhat similar must be my remarks respecting

vesication; that is, the effects cannot well be decided without entering into many details. In relieving pain it was certainly beneficial in many cases, except perhaps for pain in the head, in the early period of the disease. But, from the whole effects, I have been induced to use it less and less frequently for several years past.

In reviewing the statements, which have been made in respect to treatment, we may, I think, adopt the following conclusions; at least, we may adopt them, as rendered probably just, and as worthy to guide us in future efforts for the welfare of those, affected with the typhoid, or continued fever of New England.

First, that on the attack of this disease, the patient should immediately desist from labor and mental exertion, abstain from food, except of the simplest liquid food, and place himself in bed, or, at least, in a state of repose.

Second, that free evacuations should be made at the beginning, and that in doing this, a day is important. It is better that they be made the first day than the second, better on the second than the third; but that it is especially important that they should be made as early, as the third day. That an emetic of tartarized antimony should first be given, and then an active cathartic, or the two in combination. If there is constipation at the time, an active enema, given at first to disembarrass the bowels, would no doubt facilitate the action of an emetic. If the vomiting and purging are not followed by great relief, venesection should be practised on the following day,

unless the constitution should be very feeble, or the case very mild.

Third, if the disease has not subsided after the evacuations, tartarized antimony should be given every two hours in increasing doses, after the method of Odier before mentioned. Meanwhile, the bowels should be kept open, and, for two or three of the first days, it would be well that calomel should enter into the medicine used for this purpose; not, however, giving more than one moderate dose in a day. It should be noted, however, that, usually, after the antimony has been given for forty-eight hours, this will act sufficiently on the bowels, and that sometimes it must be restrained by opium.

Fourth, that, when the disease subsides early under any active treatment, it is quite essential that the patient should be restrained from solid food for two or three days, at least, after he has an appetite for it; and that he then use only vegetable food in small quantities, for two or three days more. Likewise that he should not be allowed to make any efforts of either body or mind, until his convalescence is fully established. By this it is not intended that he should be confined wholly in bed, but that he should be confined to his chamber, and not allowed to talk on business, nor on any interesting subject.

Fifth, that evacuations, vomiting and purging at least, may be resorted to with advantage in the second week; and that perhaps some benefit may be obtained from antimony in small doses, when commenced in that week. But that, after that period,

no active treatment should be employed, or none which will cause any serious inconvenience to the patient.

The remarks under the following heads are offered as the result of my experience, as it remains in my mind; but not as deductions made according to the numerical method.

Sixth,—as to diet. There is no point, probably, on which all practitioners are more agreed, than that food should be withheld from persons affected with this disease in its early period, except only the mildest, or most bland, liquid articles. Probably food would be injurious in its early period, at least, if it could be digested. But it cannot be digested perfectly, and often not at all, and that alone should forbid the use of it. When the disease is arrested or mitigated by treatment, it is very certain that an indulgence in the use of food is most commonly injurious, and that the cautions already stated, are not too severe. When, however, the patient is fully reinstated, he must be allowed some extra food for the recovery of his flesh and strength. This must be done cautiously; but an extreme and protracted abstinence is injurious. When the disease runs its usual course, and the appetite for food returns, is there any danger in the indulgence of it? To this question I answer, in proportion as the return of appetite takes place early, more caution is necessary. If it takes place at, or about the end of the third week of the disease, if it is decided, and if it is accompanied by a cleaning of the tongue, almost any

article, which the patient craves, may be allowed him with safety. The appetite is usually a sufficient guide as to the quality of the food; but not as to quantity. In a large proportion of cases it will be found a most uncertain guide, as to quantity. Hence it is necessary to begin with small quantities, and to increase gradually. It is equally necessary to make the intervals long between the portions of solid food, which are given in the early period of convalescence. At first, there should be one portion of solid food in the day; the next day, if every thing is favorable, two portions, with five or six hours between them; and two or three days later, watching the effects, three meals may be allowed. But we are not merely to feel the pulse under these circumstances, to see if the fever has increased. The danger is not, I apprehend, that the system will be too suddenly nourished. It is that the enfeebled organs of digestion may not be able to digest the food. We must therefore watch all the signs, which refer to those organs. Only, if the head should ache, or other organs be disturbed, we should remember that the prominent signs of indigestion are often shown elsewhere than in the stomach, and stop the food till it appears whether this is not now the case. It is also to be constantly remembered, that constipation of the bowels will be followed by indigestion, and that evil must therefore be guarded against.

Seventh, cordials. On this, as under the last head, I must give the convictions, arising from the most careful observations I have been able to make

in many years. I cannot adopt the more accurate mode of the numerical system. Nor in this case could this system be usefully followed, unless with the greatest attention to the state of each case. It has appeared to me that we should not adopt the rule to give cordials, nor to withhold them, in every case. When a patient is induced to take cordials reluctantly, they seldom benefit him, and are often followed by injury. When he is greatly enfeebled, at a late stage of the disease, he may be safely asked if he wishes for them, and if he does, he may try them; they will seldom hurt him then, if he takes no more than is grateful to him. When he spontaneously demands them, as late as the third week, they will almost always be found useful. Now, in following these rules, I have occasionally found a patient, who would take a large quantity of some cordial liquor. But this has been rare. Few take them longer than two or three days, and the majority of patients do not take them at all. It is proper to add that by cordials I mean vinous liquors. I have most commonly found cider grateful in the first instance, beginning with an ounce two, or three times a day, and increasing according to the effects. Sound beer, or ale is more rarely, but sometimes grateful. In patients much exhausted, however, the strong foreign wines, Sherry, Port and Madeira are found most useful. These articles may be diluted, or may be employed to season articles of diet, or may be given alone, according to the taste of the patient.

In conclusion, I will indulge the hope that this

report will be of some use to my brethren. It has cost an amount of labor to arrive at its details, which could hardly be credited by one, who never engaged in a similar work. There is one benefit, at least, which may be derived from it by those, who seek to promote science. They may learn from its defects how much may be gained by making their observations full and exact in the first instance. This will be best effected by fixing in their minds all the questions, which a strict inquiry after truth, may call on them to answer in respect to each case.

ARTICLE V.

ON THE

TREATMENT OF DELIRIUM TREMENS,

BEING AN APPENDIX TO AN ESSAY ON THIS DISEASE, PUBLISHED IN VOLUME V.

By JOHN WARE, M. D.

In some remarks on delirium tremens, which were published among the Communications of the Massachusetts Medical Society, a few years since, and which were founded exclusively on cases which had occurred under my own observation, I expressed the opinion, that this disease was not capable of being arrested in its course by treatment,—that the paroxysm of watchfulness and delirium was not shortened by remedies, but would continue a certain time, and then arrive at a spontaneous termination, either in death or recovery,—and that opium, so far from exercising, as many have supposed, a favorable influence on the event, served rather to increase than diminish the mortality.

The opinions then expressed, were not founded upon any strict or analytical examination of the cases referred to, but were simply the result of the general impressions which are left upon the mind of the prac-

titioner, by the observation of disease, as it presents itself in the routine of ordinary practice. I am fully sensible of the cautious reliance which should be placed on results which have been thus obtained, and it seemed, therefore, desirable to inquire how far these opinions would be confirmed by a more strict examination of the cases on which they were founded.

Such an inquiry has accordingly been made, and the results I now lay before the Society. Since the publication of the paper alluded to, a few cases of delirium tremens have fallen under my care, and these have been included in the examination. Other cases, on the contrary, which were then referred to, have been now rejected. The objects of that paper embraced a general history of this peculiar delirium, whether occurring in a distinct paroxysm or only as a transient symptom in the course of other diseases. I have now only included those cases in which the delirium presented itself in the form of a regular paroxysm. I have also excluded 31 cases, which occurred under my care at the Boston almshouse, as I have no notes of their history or treatment, but merely of the event of each case.

The number of cases in private practice was 69, occurring during a period of about 20 years. Of these cases, 63 occurred among males, and 6 among females. The whole number of deaths was 11,—all the fatal cases were of males. Of 31 cases, at the almshouse, 5 were fatal. The ratio of mortality in all the cases was thus very nearly the same.

1. Eight cases were treated by *large doses* of opium, given with the intention of bringing about a termination of the paroxysm by sleep. The quantity administered varied, in different cases, from 24 to 72 grains, and it was usually given in the course of 48 hours. Four of these cases proved fatal. One died after sleep had been procured; the patient never awaking after the full effect of the remedy had been produced, but expiring in a state of coma. The remaining 3 died without having slept. Neither of these 8 patients were bled. One of them was the subject of a severe acute disease, dysentery, in the course of which delirium supervened; this was a fatal case. The others, so far as could be ascertained, labored only under such general symptoms of disorder as are common to those made sick by intemperance, or some such chronic ailment as is frequent among persons of those habits, and could not be supposed to influence the course or event of the delirium. In the cases which recovered, restoration to health took place speedily and completely after sleep had taken place.

2. Seven cases were treated by *small doses* of opium, or opium given in such manner and quantity as not to have a distinct and powerful influence in the procuring of sleep, the quantity not exceeding 2 or 3 grains in 24 hours. Two of these patients died, both without having slept. One was laboring under severe peripneumony when attacked by delirium tremens;—this case was fatal. One patient was bled, and this was one of the favorable cases.

3. Twelve cases were treated principally by repeated and continued vomiting, according to the mode of practice recommended by Dr. Klapp, of Philadelphia. Tartarized antimony was chiefly relied on for this purpose, but in a few cases the sulphate of copper and ipecacuanha were substituted, with no apparent difference in the effects of the treatment. Two of these patients labored under severe disease, one of the brain, and one of the cellular membrane around the knee-joint. The former died, the latter recovered. One patient was bled, and this recovered. Of the whole number, 1 died.

4. In 2 patients, a single copious bleeding from the arm was the only remedy employed, and in both the disease speedily gave way.

5. In 9 cases, the mode of practice was what may be termed, for convenience of distinction, eclectic. The treatment was adapted to the prominent symptoms in each patient, having regard, in its application, rather to the general character of the case and the indications of derangement in particular organs, than to the presence of the peculiar affection of the brain which constitutes delirium tremens. Of course, a large proportion, 7, of these cases were decided cases of acute local disease, and were treated by the usual remedies. Five of the 9 were bled; and of these, 2 died. Of the whole 9, 3 died, all of them being cases of peripneumony.

6. One case, in which the delirium accompanied erysipelas of the face and head, was treated by large doses of the sulphate of quinine. This recovered.

7. One case was treated by mercurials,—salivation occurred, and the patient recovered.

8. In 29 cases, the mode of treatment was what may be properly denominated expectant. It is not intended to imply, however, that no remedies were administered. At the commencement of many of them, active measures were employed for a short period. Thus some were bled, some leeched, to some an emetic was given, several were blistered upon the neck, and all were more or less subjected to the operation of cathartics. Besides these remedies at the outset, various articles were administered in the course of the several cases, but usually of an inefficacious character, or in such doses as probably to have had no influence on the course of the disease. For example, small doses of Spir. æther nit., Ammon. acet., liq. Tinct. hyoscyam., Ext. conii., Tinct. humuli, Tinct. valerian, Tinct. assafœtid., and various other medicines, were administered, but from the amount and efficacy of the substances thus taken, no physician, acquainted with their power, would for a moment suppose them to have had any control over the disease.

All these cases were free from combination with acute disease, with one exception; in this there was inflammation of the arachnoid membrane of the brain, as determined by dissection. This was fatal. Four patients were bled, and all of them recovered. Of the whole number 29, 1 died.

The results of the different methods of treatment will be more readily compared, if they are thrown together into a tabular form:

Treatment.	Number of cases.	Bled.	Died.	Recovered.	Complicated with acute disease.
Opium, large doses,	8		4	4	1
" small, "	7	1	2	5	1
Emetics,	12	1	1	11	2
Bleeding,	2	2		2	
Eclectic,	9	5	3	6	7
Quinine,	1			1	1
Mercurials,	1			1	
Expectant,	29	4	1	28	1
	69	13	11	58	13

It appears from this statement, that of 15 cases in which opium constituted the principal remedy, 6 died; whilst of 54 in which opium was not used at all, or only incidentally and in small quantities, only 5 died. Still further, if we separate from these 54, the 9 cases in which the treatment was eclectic, and in which the mortality seems to have arisen from the combination of acute disease, we have a remainder of 45 cases, of which only 2 were fatal. Again, if we compare the mortality of those cases in which opium was pushed to the full extent advised by writers on this disease, with those in which no active remedy was employed, we have a mortality of 1 in 2, against a mortality of only 1 in 29.

This difference in the results of treatment would seem altogether too great to be attributed to accident, and goes far to establish the truth of the opinion formerly expressed, that opium given in large doses is actually injurious to patients laboring under delirum tremens. But even admitting it to be possible, that the great proportion of fatal cases occurring where opium was used, was accidental, it certainly, I think, will not be contended, that the favorable termination of the cases not treated by opium, was also owing to

accident. And it will certainly follow, that opium, if not absolutely injurious to these patients, is at least useless, and that our success in this disease will be sufficiently satisfactory without it.

The examination which has been made of these cases, has led me to the notice of some other circumstances relating to the history and treatment of delirium tremens, which it may be worth while to record.

And first, it appears, that a case of this disease is not often fatal, unless some other affection is present, which is in itself dangerous, and liable, even without its complication with delirium tremens, to prove fatal. Of the 11 fatal cases above recorded, 7 or 8 were of this character. It is not, however, always in our power to be certain of the existence of such a combination, since the effect of the delirium is to absorb or overshadow whatever other affection may coexist, and thus to obscure its symptoms and prevent us from recognising its presence. It may have been possible, therefore, that in the other fatal cases where no such combination was apparent, it may have existed. But it is still worthy of remark, that of the fatal cases occurring among patients who were presumed to be free from any such combination, 2, if not 3, were of those who were subjected to the full opium practice.

2. In three of the fatal cases, death took place after the patient had slept. We have been taught to rely on the occurrence of sleep as a pretty certain indication of a favorable termination. It would appear, however, that to this indication there are many

exceptions. Neither is the occurrence of sleep in favorable cases always followed by a termination of the paroxysm. Eight patients slept more or less during the continuance of the disease; awaking to exhibit all the symptoms which had previously existed.

3. Convulsions have been considered an unfavorable symptom in delirium tremens; but of 9 patients in whom they occurred, only 2 were among the fatal cases. I will not assert positively, that all the instances in which they took place were noted, yet I do not think they were often omitted. Especially it is probable, that they were not overlooked in the fatal cases. Hence, if there be any error, it is one which would diminish rather than increase the ratio of mortality among the cases presenting this symptom.

4. General blood-letting has been usually regarded as inadmissible in the treatment of delirium tremens, and is, by some, thought highly injurious. Thirteen patients were bled from the arm, at some period in the course of their disease. Of these, only 2 died, and these were both affected by peripneumony. This would seem, at least, to show, that bleeding is not a dangerous remedy, since the cases in which it was employed were principally those in which there was a combination of some acute disease with the delirium; in which class of cases, as already observed, very much greater danger exists than in those in which the delirium is uncombined.

Boston, April, 1838.

ARTICLE VI.

REMARKS

ON THE

Pathology of the Typhoid Fever of New-England;

AS EXHIBITED IN ITS PHYSICAL SIGNS, AND ITS ANATOMICAL APPEARANCES.

By ENOCH HALE, M. D.,
Attending Physician to the Massachusetts General Hospital.

[Read at the Annual Meeting, May 29, 1839.]

The character of this Society demands, for the present occasion, the discussion of some subject of professional interest. The physician can never forget his calling. Although we meet for the enjoyment of social intercourse, as well as for the transaction of important business, we cannot so far lay aside our ordinary habits of thought and feeling, as to seek entertainment from any topic, which has not a direct reference to our peculiar duties and relations to society.

Of the many topics from which our selection might thus be made, no one, perhaps, possesses a more general interest, than that of *Fever*; and no

other has so often received the attention of the Society at its annual meetings. Fever is a disease which, to a greater or less extent, every where prevails; and every physician is therefore called upon to treat it. Its pathology is intimately connected with that of many other diseases, so that a right knowledge of it would do much to explain them. The different views of it, too, which have been entertained at different times, give a perpetual variety to the discussion of it.

The researches of M.M. Petit and Serres, of Bretonneau, Chomel, Andral, and especially those of Louis, establish the fact, that the prevailing fever of Paris is constantly attended by certain specific physical appearances during life, and as constantly exhibit certain uniform changes of structure after death; while other changes, occasionally, but less constantly, observed, are found in no other disease. It remains to be ascertained whether the same facts prevail in respect to other modifications of fever, or to the fever of other places; whether every form of fever is distinguished by peculiar physical appearances, or essential anatomical characteristics; and, secondly, whether these characteristics, so far as they exist, are always the same in the same disease, recurring at different periods, and in different places.

There is much reason to doubt whether the fevers of Great Britain do exhibit the same characteristics as those of France; and if not, the question will then arise, how far the absence of these features will

prove them to be distinct diseases. How the matter stands in regard to the fevers of our own vicinity, it shall be the purpose of the present paper to show. In other words, I propose to offer some remarks on *the Pathology of the Typhoid Fever of New-England, as exhibited in its physical signs, and its anatomical appearances.*

The very able Report on the Typhoid Fever of New-England, by Dr. Jackson,* which was published in the Communications of this Society the last year, gives so complete a view of the phenomena of the disease, as they are presented in the symptoms and the effects of remedies, that it would be both superfluous and presumptuous for me to add any thing, on that part of the subject. The external signs of disease, and the investigations of pathological anatomy, have received much more attention among us, within the last few years, than ever before; and, although the author of the Report had done much, probably more than any other man, to excite this attention, the period at which his Report closes, prevented him from applying the full benefit of it in that document.

Since the close of 1835, as well as for the two or three years preceding, the observations made at the Massachusetts General Hospital, and some cases

* A Report, founded on the cases of Typhoid Fever, or the common continued fever of New England, which occurred in the Massachusetts General Hospital, from the opening of that institution in September, 1821, to the end of 1835. Communicated to the Massachusetts Medical Society in June, 1838; by James Jackson, M. D., late attending physician in that hospital.

observed in private practice, enable us to collect a considerable number of facts in relation to this additional branch of inquiry. The results of these observations I now offer to the Society.

The whole number of cases of which I have the history in detail is 197,* being all that have occurred in the Massachusetts General Hospital since the first of October, 1833. One hundred and seventy-five of the cases terminated in recovery, and 22 patients died. Examinations were made in 18 cases; having been prevented in the other four by the interposition of friends. I have added the post mortem examinations of 15 other cases, in which the preliminary history is less complete, although sufficiently so to leave no doubt as to the character of the disease. These occurred in private practice; a few under my own observation, but the greater part were furnished me by an obliging friend.

It is difficult, in private practice, to record all the phenomena of disease, with the same minuteness and care with which it may be done in a public hospital. The rule so much insisted on by Louis, that every circumstance shall be noted, whether it have an obvious connection with the principal disease or not, whether it be common or uncommon, however valuable and important in itself, can rarely be carried into

* In this number are included only the cases whose history is tolerably complete. Wherever, from the late period of admission, or from any other cause, the history is so imperfect as to leave any doubt of the true nature of the case, it is not enumerated. If all had been counted, that are called typhoid fever (and most of them, probably, rightly called so), the number would have been considerably greater.

full effect. So many things occur, to divide the attention of the practitioner, and to prevent the full accomplishment of his purposes, that many times he can do no more than to preserve the more prominent features of a case. This is especially true in regard to examinations after death. It is, indeed, highly desirable that every part of the body should be carefully examined. But, with the imperfect facilities afforded in most cases, this often cannot be done without disfiguring the body of the patient to a degree that the feelings of our community would not tolerate, even if the physician in his zeal for pathological inquiry could bring himself to desire it.

The same difficulty occurs in a less degree in hospital practice, with all the facilities which hospitals afford. Patients cannot be examined without the consent of their friends, and this is too often either refused, or granted with such limitations as to prevent an entirely thorough examination. In the pathological history, too, where the record is made only by the attending physician, there is, necessarily, much imperfection. His mind is occupied with a consideration of the prognosis and the means of cure, as well as of the pathology and diagnosis; and many things must escape his observation, which he would not fail to notice, if his thoughts were directed exclusively to a single object.

But it does not thence follow that such observations are nothing worth, or that none but a hospital physician can pursue pathological inquiries. On the contrary, every man in the profession is able, and

ought, to add something to the general stock of medical knowledge. It is only necessary that his facts be accurately observed and stated with precision; and although they may be incomplete in some of their relations, they will not fail to accomplish some useful purpose. Much more caution is indeed demanded in the deductions to be made from imperfect observations, however accurate their statements may be. We are especially precluded from all negative inferences. If we might be sure that every deviation from the natural state was carefully noticed in our observations, we might safely regard the absence of such notice, in a given case, as evidence that the deviation did not exist. But, very few cases have been recorded with sufficient completeness to render such an inference entirely safe; and the adoption of it, unwarrantably, has been one of the most frequent sources of error.

In the analysis of cases for the present paper, I have admitted no fact which is not specifically stated, either positively or negatively, in the daily history, except where there was something either in the nature of the case, or in the record itself, to show that the attention was directed to it.

It is my design, under the name of the Typhoid Fever, to speak of the specific disease, so denominated by Dr. Jackson in his Report. My opportunities for observing it have been chiefly confined to Boston, and its immediate vicinity; but it prevails, to a greater or less extent, throughout New England. Other forms of fever are occasionally seen,

but this is far the most prevalent. The term, *typhus*, which has usually been applied to it, has been employed in a more extensive sense, so as to include other modifications of fever. It became necessary, therefore, either to restrict the application of that term, or to adopt a new one. Had the reasons for preferring the latter course been even less conclusive than they are, it would now be too late to select any other with benefit. The true purposes of a name, distinctness, and general adoption, can only be accomplished by following the example which has been so ably set, and limiting the application of the terms, *typhoid* and *typhus*, to distinct forms of disease.

Some of the phenomena, which might with sufficient propriety be termed physical, have always been ranked with the symptoms of fever; such as the pulse, the state of the tongue, the temperature, and the dryness or moisture of the skin. There are others, which have only recently been recognized as making a part of, or having any connection with, the disease. It is to this class that our attention is now to be chiefly directed. The most important of them are, the tympanitic distension of the abdomen, or *meteorism*,—*enlargement* of the *spleen*,—*rose spots* on the abdomen, and *sudamina*.

It can hardly have escaped the observation of physicians, at any period of time, that the abdomen is often enlarged in fever, with a painful sense of tightness and distension. But a much greater importance has recently been attached to this enlargement, as furnishing a distinctive mark of a peculiar

form of disease. In the typhoid fever, it is found in a very large proportion of cases. Of 197 cases, I find meteorism recognized, either in direct terms, or by necessary implication, in 130. In 24, there is nothing to show whether it was present or absent; and in 43, it is expressly said to have been wanting. It is in most cases accompanied by tenderness on pressure, especially in the right iliac region and in the epigastrium, more rarely by pain. The distension often is not so great as to attract any attention till it is sought for by the physician, and then it is frequently recognized more by an increased resonance of the abdomen on percussion, than by an obvious increase of size. It is found at different periods of the disease, most frequently near the beginning; and continues from one or two days to almost its whole length. In many cases, the tenderness on pressure is of longer continuance than the meteorism, and in some, it is discovered where there is no enlargement. The state of the abdominal muscles is various in the different cases. In some, they are soft and yielding; but in many more, they are tense and hard. The recti muscles are often extremely rigid, and exhibit their fleshy bellies and tendinous bands with great distinctness.

Enlargement of the spleen, as perceptible during life, is not of much value as a pathognomonic sign. This organ is occasionally felt below the ribs, or by pressing the fingers under the cartilages, during a full inspiration; but in many cases it cannot be perceived, even where examination after death shows it

to be much enlarged. A careful percussion would aid in discovering it. But, since there is much uncertainty in regard to the enlargement itself, as a constant occurrence, and some difficulty in ascertaining it, when it does occur, we can attach very little importance to it, in diagnosis. The spleen was felt in 19 cases, not felt in 21, and not noted in the record in 157.

It is quite otherwise in regard to the *rose spots.* They are easily observed, if properly looked for; and are of very constant occurrence. Of the 197 cases that I have analyzed for this paper, rose spots are recorded in 177. In the greater part of the remaining 20, it is apparent from the record that sufficient attention was not given to them, to render it by any means certain that they did not exist. Most of the omissions are in the earlier part of the period I have specified, before the importance of this appearance, as a diagnostic mark, was fully appreciated. In a few cases, the patient was brought to the Hospital at too late a period of the disease, for them to be visible. With this exception, I have, for a long time past, seen no case, that could with any propriety be regarded as decidedly the typhoid fever, in which rose spots were not found; and, I think, it is not assuming too much, to consider them a constant attendant upon that disease.

The true rose spot is not a pimple, as it is often called, but, as its name implies, is merely a little bright red spot; so small as often to be covered by the head of a pin, and never much larger. It wholly

disappears under the pressure of the finger, or upon a slight extension of the skin, and returns immediately when the extension is removed. It is found chiefly upon the upper part of the abdomen and lower part of the chest. It is never attended by any sensation of itching or soreness; and, as the number is often small, sometimes only four or five, rarely so many as twenty or thirty, it is extremely liable to be overlooked, unless it is expressly sought for by the physician himself. The patient, if inquired of, will almost always regard it as accidental, or too trivial to notice. They are never found earlier than the sixth or seventh day of the disease, often not till the 12th or 15th. Sometimes they remain only two or three days; but more commonly are visible in greater or less numbers until convalescence is pretty well established. In a few instances, there are found interspersed with these spots, true papulæ, of the same color, but larger and with the skin slightly elevated and hardened, and not disappearing under pressure. These pimples are generally quite numerous, and extend to other parts of the body besides the front of the abdomen and chest, and are occasionally attended by considerable itching. It might be questioned, whether these should be regarded as a sort of exaggerated rose spot, or as a complication of a different eruption. But, inasmuch as the elementary form is different, and the eruption is not confined to the same part of the body, the latter seems the most correct view of it. I have not been careful to enumerate the cases in which I have found

this more extended eruption noticed; but I think the number is not more than ten or twelve.

The little colorless, transparent vesicles, known by the name of *sudamina*, are found in the typhoid fever less constantly than rose spots, and are less exclusively confined to it. I find them noticed in 75 cases. There is, however, reason to believe, that they existed in many cases in which they were not recorded. The negative fact, that they were not found, is mentioned in 15 cases. In the remaining 107 cases, they are either not noticed at all, or not in such a manner as to afford any evidence, that they might not have been observed if sufficiently sought for. They occur later in the disease than rose spots, often not till the patient has become decidedly convalescent, when there is less inducement to examine every circumstance minutely; and, being of little importance in themselves, and giving rise to no sensation to attract attention, they are extremely liable to be overlooked.

It is not enough to know that certain phenomena are attendant upon a particular disease; we should know, also, whether they accompany other diseases. With this view, I have examined all the cases of acute febrile diseases, in the records of the Massachusetts General Hospital, for the same period of time as that in which the cases of fever occurred; that is, since the first of October, 1833. Omitting those in which there was primary local disease in the abdomen, peritonitis, dysentery, &c., the whole number is 159. In these, meteorism is recorded in

nine cases,—the spleen was felt below the cartilages of the ribs in none,—rose spots were observed in none,—sudamina in eight. The cases thus enumerated were as follows: pleurisy 22 cases, pneumonia 59, gangrene of the lungs 1, acute rheumatism 54, intermittent fever 8, measles 3, scarlatina 2, inflammation of the tonsils 5, inflammation of the larynx 1, of the pericardium 2, of the brain 1, of the veins 1. It should be observed, however, in regard to this comparison, that much more attention was given to the phenomena in question, in cases of fever, than of other diseases, and they are, therefore, more liable to have been overlooked in the latter than the former. The attention of the physician is necessarily occupied with those phenomena, which, from their more frequent recurrence in a particular association are most readily presented to his observation, and which are of the greatest importance in the particular case before him, while others, of less immediate consequence, and of less probable occurrence, are for the time disregarded. Making every allowance, however, for omissions of this sort, it is apparent that there is a very great difference in the frequency of each of these appearances. Without such allowance, taking the records as our authority, the comparison is as follows:

	THE TYPHOID FEVER.		OTHER ACUTE DISEASES.	
	No. Cases.	Per Cent.	No. Cases.	Per cent.
Whole Number,..	197		159	
Meteorism,.....	130	66	9	6
Spleen felt,.....	19	9	0	0
Rose Spots,.....	177	90	0	0
Sudamina,.....	75	38	8	5

It thus appears that meteorism, while it is rarely found in other acute diseases, is quite common, but not entirely constant, in the typhoid fever. If we had connected with it tenderness of the abdomen on pressure, as another probable sign of the same local affection, the exceptions to its general prevalence would have been much fewer. Enlargement of the spleen is not discovered during life, with constancy enough to be often available as a pathognomonic sign; yet, since it is rarely perceived in other diseases prevalent among us,—when it is felt, it pretty strongly indicates the character of the disease. The appearance of rose spots in the typhoid fever is so nearly universal, that it is fair to regard the few cases, in which they are not recorded, either as subject to some accidental omission in the observations, or else, as mere exceptions to a general fact. And, as true rose spots are never found in any other disease, they become a mark of distinction of great value in diagnosis. Sudamina, on the contrary, appear to be of very little worth as a diagnostic mark. Although more often observed in typhoid fever than in other diseases, they are neither constant in it, nor limited to it. I doubt not they might have been observed, in either class of diseases more often than they appear in the tables, if they had been more diligently searched for. But in each case, their occurrence seems to depend, rather upon the state of the skin itself, than upon the character of the general disease. Wherever the skin is for a length of time kept in a state of perspiration, from whatever cause, there sudamina will generally be found.

Pathological anatomy furnishes us with additional marks of distinction between the typhoid fever and other diseases. That no more has been effected by it in times past, is to be attributed, in part, to the long prevalence of the opinion, that fever is a general disease, not dependent upon, or accompanied by, specific changes of structure; and partly to the difficulty of making examinations of the dead body with sufficient care and thoroughness, to detect all the changes which it may have undergone.

In the cases upon which these observations are founded, the examinations have been made with different degrees of completeness, according to the circumstances of each case. At the Massachusetts General Hospital, especially since the appointment of an assistant physician, who has the particular charge of this duty, every part of the body was, in most cases, fully inspected, and the results carefully recorded.

The whole number of examinations, of those who had died of typhoid fever, was 33. The head was examined in 14. There was some effusion of serum in the arachnoid or pia mater in 10 cases; an increase of bloody points in the cerebrum, with other marks of fulness of the blood-vessels in four; glands of Pacchioni large in two; and three were healthy. These appearances are not peculiar to this disease; but are found, perhaps, quite as frequently in many others.

The passages in the neck were examined in only seven cases. Ulceration of the epiglottis was ob-

served in one case, and ulceration of the larynx in two. In the remaining four cases, all the passages were healthy.

The state of the lungs was noticed in 31 cases. In 18, they were healthy, as well as the pleura; in three, there was effusion into the cavity of the pleura; in eight, there was more or less of hepatization of the lungs, sometimes in only one or two small masses, at others extensive, and in one or two cases in both lungs; in two, the lungs were engorged with blood; in one, infiltrated with serum; and in two, there was more or less of emphysema. The *heart* was examined in 28 cases. In three, there was somewhat more than the usual quantity of serum in the pericardium. The structure of the heart itself was healthy in all, except that in two or three it was rather flaccid; in about the same number, a little thickening about the mitral and semilunar valves.

In the abdomen, the morbid changes are more important. The *peritoneum* was sometimes extensively and highly inflamed. But the peculiar circumstances under which this inflammation occurred, will be better described hereafter. In other, and by far the greater number of cases, it was not particularly affected. The condition of the stomach is noticed in 32 cases. In 17, it was nearly or quite healthy; in six, there were ulcerations in the mucous membrane, in one case perforating it; in the remaining five, small and superficial; in five, the mucous membrane was softened more or less extensively, but in no case thickened; and in five, it was some-

what mamelonnated. In the *small intestines*, the mucous membrane generally was healthy, except that it was often of a deep red color in the lower part of the ileum, and sometimes was a little softened.

The principal seat of disease was in *Peyer's glands*. These glands have become so important in all discussions of the subject of fever, that I shall be excused for speaking of them in some detail.

Peyer's glands, in their natural state, are so little elevated above the surrounding parts, and differ so little in color and appearance, that they can scarcely be distinguished, except by the interruption which they cause to the valves of the intestines. By this means, they may be discovered in oval patches, of different sizes from one or two lines to an inch and more, chiefly occupying the portion of intestine opposite the mesentery. They are most numerous in the ileum near the cœcum, and gradually diminish as we ascend; but are occasionally found as high as the duodenum. On holding the intestine up to the light, they are observed as little granular bodies aggregated together, producing some little opacity in the coats of the intestine, and a slight appearance of thickening. Sometimes this thickening is apparent upon the surface of the mucous coat, without any change of color, or other indication of disease.

When diseased in typhoid fever, these patches become thickened and their color somewhat changed. Their outline is strongly marked, and the surface

studded with granular elevations, presenting an aspect not unlike that of ringworm on the skin. These appearances are modified, according to the period of the disease at which death takes place. When the patient has died early, there is a well-defined, uniform thickening of the patch, commonly of a light red color over the whole surface, sometimes surrounded by a deeper red line; the intervening surface being softened, and studded with numerous minute, opaque points. Twenty or more of these patches are often discovered. They are always the most numerous at the lower extremity of the small intestine; and the disease is always more advanced in those near the cœcum, than at a greater distance.

In a somewhat later stage of the fever, ulcerations are observed in some of the diseased patches. These are of different sizes, sometimes being quite small, at others, occupying nearly the whole patch. They are situated in the sub-mucous cellular coat of the intestine, laying bare, and sometimes destroying the muscular coat; and, in some instances, as we shall presently state more distinctly, penetrate the peritoneal coat. In these, there is the same evidence of greater progress in the patches near the cœcum. Not unfrequently, there is a particularly large and deep ulcer, situated almost, or quite, in the cœcal valve, while some elevated patches, higher up the intestine, are free from ulceration.

In some instances, life is much more prolonged. The fever abates, and the patient is for a time more

or less convalescent. He then relapses, either by a return of the original fever, or, more often, by an attack of pneumonia, or other complication, and dies after a long struggle with disease. In these cases, some of the ulcerations in Peyer's glands are found to be more or less cicatrized. The margin is of a blueish or greyish color; and sometimes the color is diffused over the whole surface of the patch; and, on a careful inspection, a delicate mucous membrane is found to have extended itself over the cicatrized part. This cicatrization is found to have made more progress near the termination of the ileum, than above, showing, as in the other cases, that the affection of the glands began in that part.

A fourth class of appearances is formed by the perforation of the intestine. The ulceration, which we have already described as being of various depths in different cases, sometimes penetrates the peritoneal coat; and the contents of the intestine are poured into the peritoneal cavity. The inevitable consequence is violent inflammation, and death. This termination is not confined to cases, that in their previous history have been remarkably severe. On the contrary, it is as often seen in those of a mild character. The patient was, perhaps, walking about, with a confident expectation of speedy recovery, when he was suddenly attacked with excruciating pain in the abdomen, and died in a few hours. There are no means by which it can be known to what extent there is danger of this occurrence, in any individual case. We are obliged,

therefore, to give a cautious prognosis, in every case, in order to avoid exciting too confident expectations of a favorable result.

In one or more of these modifications, the affection of Peyer's glands is found in every case of the typhoid fever. Of 33 cases, nine presented only the first stage of the affection, thickening, softening and a red surface; in 18, while some of the diseased patches were in this stage, others, nearer the lower extremity of the intestine, had passed into ulceration, the ulcers varying in number from two or three to 20 or more; in three, some of the ulcers near the cœcum, had become more or less cicatrized; and in three, the intestine was perforated. It is worthy of remark, that the perforation was in no instance in the ulcer nearest the cœcal valve; and in one case, it was at the distance of 44 inches. The period at which these various changes take place, is various, according to the rapidity of the disease. In two cases, ulcerations were found before the 20th day; while in one, the disease had continued four months, and yet there were but eight ulcers, and no cicatrization.

The *Solitary glands* in the small intestines were found enlarged in 15 cases. In 11, they were not visible; and in seven, although the intestines were opened, they are not mentioned. Probably in most of these, they were not enlarged. The affection of these glands, in the small intestine, like that of Peyer's, is chiefly found in the inferior portion. In the large intestines, the solitary glands were enlarged

in five cases. These organs were found healthy in seven cases; in six, their condition is not mentioned; in two, the mucous membrance was softened; in 17, ulcers, often quite numerous, were found in the cœcum, or first part of the colon. These ulcers were not large like many of those in Peyer's glands; but small and distinct. In one case, in which the immediate cause of death was hemorrhage from the bowels, a firm coagulum of blood was found hanging from an ulcer in the cœcum, showing that it was the source of the hemorrhage. In this and some other cases of hemorrhage, both the large and small intestines contained a considerable quantity of blood.

The condition of the *Mesenteric* glands corresponds to the state of disease in the intestinal canal. Those glands which belong to the healthy portions of the intestines were healthy; while those of the portions containing diseased patches, were enlarged, red, and infiltrated,—and at later stages, softened, and sometimes suppurated. The *Spleen* was large in 21 cases. In some, it was quite large, twice or three times its natural size; and then it was commonly soft in its internal texture, breaking down by pressure into a sort of thick, dark red fluid. In seven cases, it was of natural size; in two, it was small; and in three, its condition was not noted.

The *Liver* was examined in 27 cases. Its structure was healthy in 14; it was more or less soft or friable in 10; hard in one; congested in one; and in one the serous coat of the left lobe was highly inflamed, and covered with a coating of lymph.

The following cases, abridged from the Hospital records, will serve as illustrations of the pathological changes observed at the different periods of the disease. The examinations after death were made by the late assistant physician of that institution,* a gentleman highly distinguished, as well for the extent and accuracy of his knowledge in pathological anatomy, as for the zeal and diligence by which that knowledge has been acquired, and is maintained.

CASE I.

Death the 12th day: Peyer's glands, thickened, red and softened; solitary glands enlarged; mesenteric glands enlarged and softened; spleen large.

W. S., aged 23, was admitted into the Massachusetts General Hospital, September 24, 1835. He had been ill enough to call a physician on the 15th, but had complained of lassitude and loss of appetite, for some days previously. He had been under medical treatment from that time; at first, with relief, but the disease had afterwards increased. He had had diarrhœa, which had ceased before his entrance into the Hospital. He was now delirious, so as to be unable to give any account of himself; his countenance pale, and without expression; eyes wandering, pupils dilated; tongue red at tip and edges, cracked and scaly over the surface, articulates with difficulty; teeth covered with dark brown sordes;

* John B. S. Jackson, M. D.

mouth open; skin warm, except of feet; pulse 144, compressible, not very small; abdomen full and tense, shrinks from pressure at epigastrium and in right hypochondrium; no rose spots; makes no complaint of thirst, or of any suffering, talks much and incoherently; restless; makes frequent efforts to rise and escape, as if from danger.

Apply ice to head; sinapism to feet.

Sept. 25. Had no sleep in night; one dejection in bed; eyes very much suffused, as if bruised; tongue perfectly dry and crusty; head hot; skin dry; pulse 120, sharp, not very small; subsultus of tendons; abdomen firm, meteorism not very great; no sudamina.

℞. Antimon. Tartar. gr. ii.
Aqu. bullient. ʒ vi.
M.

℞. Hydrarg. Submur. gr. viii.
Pul. Acaciæ. gr. xvi.
M. in chart div. No. viii.

One *powder, floating in half an ounce of the solution every four hours.*

Sept. 26. Countenance less sunken; eyes less suffused; tongue scaling, crusts separating; skin moist, cooler; pulse 132, better volume; no rose spots, sudamina well marked; is more manageable without restraint; has had four dejections; dejections and urine involuntary. *Medicine of yesterday every six hours.*

Sept. 27. Countenance much sunken, mouth partly open, teeth covered with sordes, eyes much suffused,

glazed and motionless; excretions involuntary; skin warm and moist; much subsultus; pulse very small and weak; sudamina very numerous and distinct. He died an hour after the visit.

EXAMINATION—TWENTY-TWO HOURS AFTER DEATH.

Exterior.—Very rigid; lividity on back of thorax; sudamina on each side of neck; abdomen moderately full.

Head.—Brain firm; slight effusion of serum in pia mater.

Thorax.—Pleura healthy; and lungs also, except some serous injection of upper left lobe. Pericardium natural; heart rather flaccid, blood in moderate quantity, liquid.

Abdomen.—Stomach not contracted, containing several ounces of rather thick, greenish fluid. Mucous membrane, towards cardiac orifice, of a deep red color, but natural as to thickness and consistence. In it, but not penetrating its substance, were five or six narrow superficial ulcerations, about one-third of an inch long. Elsewhere mucous membrane of natural color, with some mamelonnement towards pylorus. Small intestines not contracted, contained a considerable quantity of mucous and other secretions, of healthy appearance, except for about two feet in middle of ileum, where they were deeply stained as if with blood. Throughout the last nine feet, Peyer's glands were in a state of acute disease; about 26 patches counted. The disease increased progressively towards cœcum. It consisted of a very remarkable, well-defined, and uniform thicken-

ing, and such a degree of softening that the surface, to some depth, might be scraped off like a pulp; many of these were immediately surrounded by a red line, while the surface generally was of a light red color, contrasting strongly with the deep red of the surrounding mucous membrane. There were no ulcerations; but numerous opaque, whitish, very minute points were visible in the softened portions. Several of the patches were by estimate, two inches in length, and one near the cœcal valve was five or six inches; some were not more than a third or a half of an inch broad. Throughout the upper portion of the intestine the patches were quite distinct, and healthy; a few of them, however, appearing to be softened before becoming otherwise diseased. The solitary glands in the last nine feet of the intestine were very numerous; and in some cases, so much enlarged, that it was difficult to distinguish them from the small irregular patches of Peyer's glands. The mucous membrane generally throughout the intestine was well, except for its deep red color in lower portion. *Large intestines*, moderately distended with gas; solitary glands numerous and enlarged, mouths patulous, and in many apparently ulcerated; just within the cœcal valve were two ulcers, about a third of an inch in diameter, dark colored, edges red, penetrating to the muscular coat. Mucous membrane generally appeared well.

The *Mesenteric* glands corresponding to the lower portion of small intestine were enlarged, quite red, soft,—so as to break down easily under pressure,

much infiltrated with serum, but containing no pus. The glands in the mesocolon were somewhat in the same state. The rest of the mesenteric glands were healthy. The *Liver* was healthy; the gall bladder containing an average quantity of yellowish, quite liquid bile.

The *Spleen* was large: length seven inches, breadth five inches, thickness two and a half inches; of a deep red color, readily breaking down under pressure.

The *Pancreas*, *Kidneys* and *Bladder* were healthy.

CASE II.

Typhoid fever, with pulmonary apoplexy: death about 24th day. Pleura and lungs much diseased; Peyer's glands extensively ulcerated; ulcers in large intestine; spleen large; mesenteric glands enlarged, softened, and infiltrated.

October 13, 1836. L. W., aged 28, teamster: has been unwell six months; present illness of three weeks standing. This patient was brought to the Hospital in a very advanced stage of disease; his previous history not much known. He reported that he was taken with chills, and pain in the chest. He now complained of very little pain, but had evident marks of fever, complicated with pneumonia; abdomen tympanitic, pulse 124.

Oct. 14. Did not sleep; delirious all night; countenance wild; great muscular tremor of the

whole body; tongue moist, pale, tremulous, pulse 144.

Oct. 15. No sleep; countenance rather sunken; skin dry, warm; respirations 48, thoracic; muscular system much agitated, trembling of arms, picking of bed clothes; tongue dry, tremulous, with a whitish coat. He died the same evening.

EXAMINATION.

Head.—Membranes, and brain, healthy.

Thorax.—Pleura of left side covered with lymph, adherent at upper lobe, cavity containing 55 ounces of turbid serum. Left lung, upper lobe, emphysematous; in lower lobe, pulmonary apoplexy, a dark red mass occupying a considerable portion of the lobe, evidently formed by the effusion of blood into the pulmonary tissue. In the right pleura were some old adhesions. The upper lobe of the right lung was emphysematous, the lower lobe condensed, somewhat friable, no effusion of blood.

Air passages. — The thyroid and cricoid cartilages were considerably ossified. There was a deep ulcer in the larynx, just below the posterior extremity of the right vocal chord. Pharynx, epiglottis and glottis healthy; pericardium contained six ounces of serum.

Abdomen. — *Stomach healthy.* — *Small intestines* slightly distended, contained a considerable quantity of mucous secretions; mucous membrane much discolored by secretions, no where red, except round two of the ulcers; softened in lower part of the

ileum, thickness natural. *Peyer's glands*, 21 patches counted,—the first, eight feet from the pylorus. Several were examined particularly, and found to be considerably thickened, and rather softened. In a few, the greyish points were numerous but not very distinct; none were at all red, nor was there any redness about them. Seventeen ulcers were counted in the lower part of the ileum, all within less than five feet of its termination. Two of them occupied but a part of the patches in which they were situated, leaving the remaining portions but little affected. In the others, the structure of the glands was nearly destroyed, so that there was little evidence of the ulcers having been formed in them except from their shape and situation, and from the circumstance, that there was no other appearance of glands. The cellular texture remained, being slightly thickened, and opaque, and showing distinctly the outline of what had been a patch. Some of the ulcers were distinct, others were in groups, so that many small ulcers were counted as a single diseased patch. One, situated two feet from the cœcum, was an inch and three-quarters long, and an inch broad; another, three inches from the cœcum, measured two and a half inches by one and a half inches. There was an irregular ulcer at the valve. The form of the ulcers was generally regular, oval, or round; edges well defined, in a few somewhat thickened, firm and rounded. The muscular coat of the intestine formed the base of the ulcer in nearly all; the cellular coat in a few only; and in one, half an inch in diameter,

situated 18 inches from the cœcal valve, full half of the base was formed by the peritoneum alone, the muscular coat having been ulcerated away, and leaving the peritoneum extremely thin, perfectly transparent, and apparently just ready to break through. The base of two, and the mucous membrane immediately around them, was red; the mucous membrane around two others had a decidedly bluish grey color. The rest were of the natural color of the tissues in which they were situated.

The *Solitary glands* were not at all enlarged. *Mesenteric glands* enlarged, softened, friable, and infiltrated with serum, throughout, getting more so from the upper to the lower part of the intestine; the color whitish in the upper part, becoming dark red in the lower; and in several of these last were found rounded opaque tuberculous-looking masses, from the size of a turnip-seed, to that of a peppercorn; no proper suppuration.

The *Large intestines* were considerably distended, and contained a large quantity of very dark brownish, almost black substance, of a homogeneous appearance, and soft solid consistence; in the rectum, having a reddish tinge as from blood. There were a great number of ulcerations in the mucous membrane in the first four inches, too numerous to be counted, of a regular form, more of them oval than round, averaging from four to six lines long. In one or two places, two or three had united to form one large ulcer; edges of ulcers well defined; no redness about them, but around some was a bluish

grey color; the base was formed by the muscular coat, which, as well as the mucous, was much thickened in this part of the intestine. Beyond this part, 25 or 30 ulcers were scattered, in appearance much like those described.

The *Spleen* was five inches eight lines long, four inches wide, and one inch and a quarter thick; weight seven and a half ounces; dark brownish red color, very soft and moist, breaking readily under pressure. *Liver* nothing remarkable; *Pancreas*, *Kidneys* and *Bladder* healthy.

CASE III.

Typhoid fever, complicated with pleuro-pneumonia: death 41st day. Pleura, lungs, and portion of liver inflamed; Peyer's glands partially cicatrized; spleen large.

G. W., aged 22, shoemaker, was admitted into the Massachusetts General Hospital, Nov. 2, 1833, on the *fourth* day of fever. He had been attacked with chills, pain in the head, back and limbs, loss of appetite, &c. On the 5th day from attack, he had diarrhœa, which lasted several days; and on the 7th, rose spots appeared on the abdomen, and continued until the 12th. On the 8th, he became delirious. By the 18th he became decidedly convalescent. His pain was gone, diarrhœa had ceased, countenance good, his delirium was gone, and he began to regain an appetite for food. He continued nearly stationary for a few days, and then relapsed. On the 28th

day, delirium returned; and on the 30th he had pain in the chest, which resulted in pneumonia. He died the 41st day.

EXAMINATION.

The head was not examined.

Thorax.—The left pleura and lung bore marks of very extensive and violent inflammation; some pneumonia of right lung; between three and four ounces of serum in the pericardium.

Abdomen.—*Stomach*, healthy. The small intestines contained a considerable quantity of mucus, colored with bile. Peyer's glands appeared to have been, at a former period, the seat of extensive ulceration. The patches at their margins were bluish, greyish, or slate-colored; and in many the color was diffused over the surface. The margins of some were thickened irregularly. In a few, all the processes were seen, from the open ulcer to the smooth shining delicate cicatrix, and from this to a membrane closely resembling the surrounding mucous membrane, with which it seemed to be directly continuous. About these parts there was no redness. Towards the cœcal valve the patches were more healed than higher up the intestine. These appearances were confined to a space of about 20 inches from the valve. The solitary glands were somewhat affected in the lower part of the ileum. The mucous membrane, generally, well. The *Large intestines* were healthy. The extreme portion of the left lobe of the *Liver* bore marks of recent

inflammation, and adhered to the diaphragm. The gall bladder was very large, partly filled with bile, otherwise healthy. The *Spleen* was twice its usual size; considerable effusion of lymph on its surface, its internal structure a part firm, and a part much softened, and contained a small diseased mass. Some serum was found in the peritoneum, and a little pus in the pelvis. The other organs healthy.

CASE IV.

Typhoid fever, fatal 32d day. Peyer's glands ulcerated; peritoneum perforated; inflammation of peritoneum; solitary glands enlarged; mesenteric glands enlarged, suppurated; spleen large.

Sept. 14, 1835. H. G., carpenter, aged 22, was admitted into the Hospital in the 11th day of fever. He had had much pain in head and dizziness, and at times some delirium; some diarrhœa, which still continued. His countenance was dull, face flushed; tongue very dry, red at tip and edges, with a very thick coat on middle; teeth dry, and covered with sordes; skin hot and dry; pulse 84; manner slow; memory imperfect; some deafness; throat sore, and parched; great thirst; abdomen tense, tympanitic, tenderness on pressure, greatest at epigastrium and in right hypochondrium; some faint rose spots. These symptoms continued, without any very remarkable change, until October 14th. The diar-

rhœa continued throughout the disease, causing four to six dejections daily; delirium was occasional only, and not violent. The pulse varied from 72 to 96. An eruption resembling acne took the place of the rose spots. In the last two or three days of this period, there were some rather decisive indications of approaching convalescence. His countenance was brighter, he took more notice of things about him, deafness less, and had some disposition for food. At 2, P. M., Oct. 4th, the 31st day of the disease, he had a severe rigor which lasted three quarters of an hour, followed by heat and profuse sweating. He appeared to be in great pain; talked incoherently; pulse 120. He died at five o'clock the following morning.

EXAMINATION—FOUR HOURS AFTER DEATH.

Externally.—Numerous sudamina on abdomen, which was moderately full.

Head.—Some effusion of serum in cavity of arachnoid, and some in pia mater; a large quantity at base of brain, and more than usual in lateral ventricles. Longitudinal sinus and veins of pia mater moderately full; glands of Pacchioni very large; brain firm, bloody points rather numerous; two or three small serous cysts in plexus choroides.

Thorax.—Left *Pleura* healthy, right *Pleura* contained about five ounces serum; a portion of recent lymph hanging from lower lobe of lung. *Lungs*, lower lobes engorged, friable, and showing through-

out the cut surfaces, dark red, almost ecchymosed spots; otherwise healthy. *Pericardium* and *Heart* healthy. *Epiglottis*, *Larynx* and *Trachea* healthy.

Peritoneum, almost every where marks of acute inflammation; 38 ounces limpid serum in peritoneal cavity. The small intestines were glued together by interposed layers of recent lymph, which was most abundant towards the right side, where also was effused much of the contents of the intestines. A large quantity of lymph on convex surface of the liver, and corresponding surface of diaphragm; none on the stomach, except towards the small curvature, and generally none on the small intestines opposite the mesentery, although there was considerable redness of the surface of the mesentery. *Stomach*, distended with flatus, contained four ounces of bright yellow liquid; mucous membrane healthy. *Small intestines* contained much light yellow, thin fluid, at upper part, and a soft solid matter of same color. The matter found in the peritoneal cavity was like this. *Peyer's glands*, in upper portion of intestine, quite healthy; disease below not increasing so remarkably towards the termination of the ileum as is often the case. Seventeen patches in a state of ulceration were counted. The ulcers averaged two or three lines in diameter, were well defined, edges red and considerably raised from thickening of the subjacent cellular coat. They generally exposed the muscular fibres. One ulcer penetrated through the peritoneum. It was situated seven and a half feet from the cœcum; was more than half an inch

long, and from one to two lines broad, and ran transversely to the intestine. The perforation was circular, about one and a half lines in diameter; edges very sharp, and peritoneal surface, for some distance around, covered with lymph. Some of the patches were quite healthy, except for the ulceration; but they were generally more or less thickened irregularly, red and softened. Many other smaller ulcerations were found, which were not in Peyer's glands, being generally more superficial, much less thickened; the edges of some very dark, almost black. A few, however, were more recent, considerably thickened, and of a bright red color. One of these, being the first ulcer that was met with, was situated 12 feet from the pylorus. The *Solitary glands* were visible throughout the last eight feet of the intestine, numerous, especially towards the cœcum, where they were transparent, and about the size of a turnip-seed. The *Mesenteric glands*, opposite the lower end of the ileum, were greatly diseased. Several were as large as a filbert, soft, of a mixed whitish and deep red color externally; and, being cut, were found to be extensively suppurated. Those corresponding to the upper part of the canal, gradually became healthy. *Large intestines*, much contracted, containing very little healthy secretion; five or six small dark-colored ulcers in the cœcum, most of them not thickened, quite superficial, but two or three penetrating to the muscular coat. Otherwise, mucous membrane well. *Liver*, tolerably natural; *Pancreas*, healthy. *Spleen*, six inches

long, four and a half inches broad, soft and of a deep red color. *Kidneys*, dark-colored, congested, and rather friable. *Bladder*, not contracted, many small red spots on its inner surface towards the neck.

We come now to the inquiry, to what extent the same morbid changes are produced by other acute diseases? I have already remarked, that the appearances in the head are not characteristic of typhoid fever. The appearances not only vary in the different cases, or are entirely wanting, but precisely the same are found in other diseases. This last remark I am not able to verify by a very full collection of cases. Of the 159 cases of acute diseases, other than typhoid fever, occurring at the Massachusetts General Hospital, that I have analyzed for the purpose of comparison, 18 were fatal; and in 15, examinations were allowed. But in the earlier portion of the time, only those parts of the body were examined which were of more immediate interest in the particular disease; or, if examined, the other parts received only a general notice that they were healthy. In eight cases, the state of the head is noticed. In four, there was an effusion of serum, three in the arachnoid, one in the pia mater also, and one in the ventricles. Pacchioni's glands were very large in one, and numerous bloody points in the medullary substance, in one.

The state of the lungs and heart cannot be brought into this comparison, because in 14 of the 15 cases, those organs or their investing membranes, were the chief seat of local disease.

The stomach was declared to be healthy, or nearly so, in seven cases; the mucous membrane was mamelonnated in three, and in five, its condition was not particularly described.

The state of *Peyer's glands* is particularly referred to in 11 cases, in all of which they were healthy; and in two other cases there is a general remark, that the organs in the abdomen were healthy; in two, no reference is made to them. To these I may add six cases of similar diseases, that I have observed elsewhere, in all of which they were healthy. I know of no case of any acute disease, besides typhoid fever, in the adult patient, in which these glands have been found diseased. In phthisis, they are often the seat of ulceration, and of tubercular deposits; but the appearances do not very nearly resemble the thickening and consequent ulceration peculiar to typhoid fever.

There is, however, another class of cases, in which these glands are affected in a manner precisely similar to the affection in that disease. This occurs in young children, in the diseases of the first dentition. My observations are not sufficiently numerous to determine with what degree of constancy this affection occurs in teething children. But they are sufficient to show, that it is not exclusively confined to typhoid fever, even in acute diseases.

The first case in which I noticed this affection was in a child 14 months old, who died suddenly in convulsions, May 28th, 1836. He had suffered from

the irritation of teething for several months previous, but without diarrhœa; and had undergone an occasional attack of convulsions, which had been mild, and had ceased to produce alarm. But now a severe fit, without any preceding indication of danger, suddenly destroyed life. On opening the abdomen, red patches were visible through the coats of the intestines. The intestines were opened throughout, and nearly thirty patches were counted, quite distinct, extending from the cœcum almost to the duodenum. Many of them were obviously diseased; and, as in typhoid fever, the disease increased towards the lower part of the intestine. They were thickened, and red; and the surface of some of them was covered with a soft whitish substance resembling lymph. The corresponding mesenteric glands were enlarged and red. The solitary glands were distinctly visible. A portion of the ileum and of the mesentery was removed and shown to several gentlemen, who recognised the appearances, as precisely resembling those observed in fever.

In the second case, a child, 10 months old, died of cholera infantum, after a week's sickness. Twenty-five patches of diseased glands were counted in the small intestine. They were thickened and red, but not ulcerated. The mesenteric glands were swollen and red; the solitary glands not visible. In a third case, a child of 18 months, died after suffering three or four weeks with diarrhœa, which terminated in cholera infantum. Thirty patches of Peyer's glands

were counted, elevated and red; and six were ulcerated; these last all within nine inches of the cœcum. No solitary glands were visible; but there were numerous little excavations, penetrating through the mucous membrane, scattered over the whole internal surface of the ileum for the distance of 18 or 20 inches from the cœcum. It seemed as if they might be ulcerations of the solitary glands; their edges were not thickened, and they contained nothing. The mesenteric glands large and red. A fourth case, was presented in a child 18 months old, who died, during the period of dentition, of dropsy in the head. Peyer's glands in the lower part of the ileum were thickened and red, and several were ulcerated. In a fifth case, similar appearances were observed, but without ulceration, in a child that died of inflammation of the lungs, after having been previously enfeebled by the irritation of teething. The sixth was somewhat different. The child had suffered severely from cholera infantum, and during convalescence, was attacked with hooping-cough, which was fatal to him. I was permitted to make only a hasty examination, under circumstances that neither allowed a careful inspection of the organs, nor opportunity to remove them. Peyer's glands exhibited obvious marks of having been diseased and cicatrized.

These are all the observations I have had opportunity to make on this point; and I do not know that the attention of any other person has been directed to it. I must be permitted to repeat, that

I do not regard them as sufficient to establish any general pathological fact, except, as I have already stated, that of an exception to the general exemption of Peyer's glands from any morbid affection in acute diseases other than typhoid fever. It might have been better to have abstained from publishing them, until a more extended series of cases should be collected to verify and illustrate them. But their direct bearing upon the present subject seemed to call for some notice of them here.

In four of the 15 cases of acute disease, before referred to, the solitary glands in the small intestines are noticed as enlarged; and in one, in the cœcum, they were ulcerated. In the remaining 11, they are not mentioned, probably because no disease was observed in them. The spleen is mentioned in 10 cases: in three, it was large; in four, small; and in three, of natural size, or healthy. In one case, where it was large, and in two, in which it was small, its texture was soft. The *Liver* was examined in all the 15 cases. It was healthy in seven; and somewhat softened, or friable, in eight. In three, it was large; in three, small; and in nine, its size was not noticed as unnatural. The other organs furnish no points of comparison to demand our attention.

It will readily be perceived, that the disease of which we have spoken, bears a very strong resemblance to the "Typhoid Affection" of Paris, so fully described by M. Louis. This has already been shown, by the History of our Typhoid Fever, as reported by Dr. Jackson. It will be very fully

confirmed by a comparison of the physical and anatomical appearances. The "Researches" of M. Louis, and Dr. Jackson's Report, are both in the hands of the members of the Society; and they are so familiar with them, that any detailed comparison of the disease of the two countries, on this occasion, would be quite superfluous.

The principal difference between them is seen in the greater frequency of diarrhœa in the fever of Paris than in our own. Of 128 cases, under the observation of Louis, diarrhœa occurred in 104,* or, 81 per cent. In the Massachusetts General Hospital, from 1824 to 1835, this symptom appeared in 167 out of 297 cases, 56 per cent. In the cases since Oct. 1, 1833, the proportion is still less, being 49 per cent.; or 96 cases out of 197.

The same difference in regard to the prevalence of diarrhœa is found in other acute diseases. Louis reports 81 cases of diarrhœa in 273 acute diseases other than typhoid fever, which is 30 per cent., nearly. In 159 cases of similar diseases, in the Massachusetts General Hospital, the diarrhœa occurred in 18, being only 11 per cent.† From these facts, it would appear that the more frequent occurrence

* Louis's Researches, Vol. II, pp. 14, 19, 22. No more than 104 cases of diarrhœa are enumerated; although it would seem from other passages that the proportion is actually much greater than this, and that some are omitted in this enumeration.

† I have omitted M. Louis's enumeration of "pulmonary catarrh," and "urticaria," &c., in this comparison, because I have no account of similar diseases to be compared with them. Those included in the comparison are of the same general character, and of a similar degree of severity.

of diarrhœa in the fever of Paris, is not to be attributed to any peculiarity in the character of the disease itself, as compared with the typhoid fever of New England, but to some more general cause, affecting in an equal proportion other acute diseases.

The fevers on the continent of Europe appear to be of the same character, generally, or at least extensively, as in Paris. Dr. Lombard says, that he always saw the same morbid appearances in examinations at Geneva;* Dr. Staberoh witnessed the same in "about 50 cases" in Vienna;† Dr. Grossheim, in 20 cases, in the Imperial Grenadier Regiment;‡ and Dr. Stannius, in 20 out of 23 cases, in Berlin. In one of Dr. Stannius's three remaining cases there was softening of the lining membrane of the intestine; in a second, the ulcers had cicatrized; and the third, was a case of petechial typhus.§

The comparison of our fever with the fevers of Great Britain, is of greater practical importance than with those of France; and, at the same time, is much more difficult. A very large proportion of our medical literature is received from England; and the greater part of our instruction in pathology and therapeutics is derived from English authors. If diseases of a different character are known by a

* Dublin Journal of Medical Science, Vol. X, p. 18.
† Idem., Vol. XIII, p. 429.
‡ Edinburgh Medical and Surgical Journal, Vol. XLVIII, p. 177.
§ Ibid., p. 169.

similar name; and the knowledge applicable to one, is applied indiscriminately to another, it is obvious that we are liable to be greatly misled, both in our pathology and treatment. There is much reason to apprehend, that this has already been done to a considerable extent. A judicious practice, in some of our diseases, has required an independence of the text-books and authorities put into the hands of our pupils, and a departure from their precepts, hardly to be acquired or ventured upon, by the young practitioner, but at the expense of much painful experience.

The comparison is difficult, because the authorities upon which it should rest are few and unsatisfactory. I know of no English physician who has investigated the fevers of his country with any thing like the patient diligence of the French pathologists. We could hardly expect, indeed, to meet again, in the same age, the laborious minuteness and care of Louis. But we might hope, from some of the numerous and well-appointed hospitals, with which England is supplied, a more full and satisfactory account of the phenomena of their diseases than we have been able to obtain.

Several of the ablest of the late British medical writers seem not to have suspected any difference of character, between the fevers of Great Britain and those that prevail on the continent of Europe. Dr. Tweedie* alludes to the fact, that the affection

* Cyclopædia of Practical Medicine, Vol. II, Article, *Fever*, pp. 161, 181.

of Peyer's glands is more common in the fevers of France than in those of England, but without any intimation that there is any other ground of distinction between them. Dr. Graves,* although he has published much on the fevers of Ireland, scarcely alludes to any observations made on the continent. Dr. Stokes,† and Dr. Copland,‡ make use of the observations of Andral and Louis, indiscriminately with those of Tweedie and other English authorities, in their pathological remarks on Fever. Dr. Marshall Hall§ speaks, indeed, of the distinction between typhus and typhoid fever ; but he mistakes for the only typhus, the severer forms of jail, hospital, and ship fevers, and confounds the ordinary typhus of England with the fever of France, as if it were of course the same disease.

The remark has often been made, however, that the typhus of Great Britain does not afford the same anatomical appearances, at least not with the same constancy, as that of France and other parts of the continent; and, at length, the distrust of the accuracy of the observations, which at first prevailed, although still followed by many a hint that the French pathologists attach vastly too much importance to them, has in some degree, given place to a disposition to inquire into the character of their

* Clinical Lectures; and various papers in the Dublin Journal of Medical Science.

† Lectures on the Theory and Practice of Medicine.

‡ Medical Dictionary, Article, *Fever*.

§ Lectures in the Lancet for July, 1838.

own disease. The obvious method of doing this effectually would be, to investigate the phenomena as they are exhibited in their hospitals. Opportunities for observations upon fever are exceedingly abundant and highly favorable, in every part of Great Britain; not only because the hospitals are numerous; but because, in consequence of the prevalence of an opinion that fever is a contagious disease, the number of patients gathered into the hospitals is very great, amounting in some to several thousands annually.*

Yet the number of careful observations, of which I have been able to obtain any notice, is exceedingly small. I find hospital reports in abundance, giving accounts of the admission and discharge of many thousands of patients, with a considerable amount of statistical information in regard to the prevalence and mortality of fever, and on various other subjects, often of no small value; but I meet with comparatively few notices of the phenomena of the disease as they were presented during its progress, and still

---

* The number of cases admitted into the Fever Hospital, Cork street, Dublin, in one year, from April 1, 1834, to March 31, 1835, was 4,524;[1] and the number in twenty-five years, was 77,866.[2] The number admitted into the Belfast Fever Hospital, in seventeen years, from May, 1818, to May, 1835, was 9,849.[3] In St. John's Fever and Locke Hospital, Limerick, the fever cases in twenty years, from 1816 to 1836, were 30,942; and in the latter year alone, there were 3,227.[4]

---

[1] Dr. Eustace's Report, Lancet for Sept., 1835, Vol. XXXI, p. 734.
[2] Dublin Journal of Medical Science, Vol. X, p. 103.
[3] Statistics of Fever, by Wm. Mayers, M. D., Dublin Journal, Vol. X, p. 33.
[4] Dr. W. J. Geary's Report, Dublin Journal, Vol. XI, p. 384.

fewer descriptions of the anatomical appearances discovered by examination after death.

In 1836, Dr. H. C. Lombard, of Geneva, visited England, Scotland and Ireland, for the purpose of investigating this question. He had been more than six years engaged in close attention to this subject, and having witnessed the examination of many who had died of typhoid fever, in Paris and Geneva, he was quite familiar with the affection of Peyer's glands, as it is found in the fever of those cities; although he describes it incorrectly in saying, that "in fatal cases, it always ends in ulceration of the mucous membrane." His investigation was not very thorough. He saw three cases examined after death (one in Glasgow, and two in Dublin), in which, from the similarity of the symptoms, he had confidently predicted the same changes of structure that he had witnessed on the continent. There was no affection of Peyer's glands in either. Being disappointed in the result in these three cases,—and it does not appear that he saw any other examinations in Great Britain,—he immediately abandons his previous opinions, founded upon the investigations of more than six years, and comes to the conclusion, not that the typhus of Great Britain is different from that of Paris and Geneva, but "that typhus fever is more a general disease, affecting the whole constitution, than a malady depending on any local inflammation or any local change of structure."*

* Dublin Journal of Medical Science, Vol. X, p. 28.

He is not wholly unmindful of the difference in some of the symptoms; but he considers the differences unimportant, and, in answer to the question, "whether the two diseases are different, or the same," he expresses strongly the conviction, that they are not "specifically distinct."

In a subsequent paper, Dr. Lombard takes a different view of this question; although it does not appear that his second opinion is founded upon any new observation of the disease. He now avows the opinion, that two distinct diseases were prevalent at the same time; one the typhoid fever of the continent, the other a *contagious typhus*, which originated in Ireland, and from there spread over Great Britain.* The suggestion, of the twofold character of the epidemic, might have been of some value, if it had been accompanied by any satisfactory explanation of the difference between them, or of the phenomena which they severally exhibit. But, as a mere speculation, having no other basis than the single difference of appearances in regard to the affection of Peyer's glands, and with no other object than to escape from a difficulty, it is entitled to very little consideration.

In 1837, Dr. Staberoh, of Berlin, visited Ireland and Scotland, for a similar purpose. He, too, was familiar with the typhoid fever of the continent; and had formed his opinions in the same excellent school of observation at Paris. His opportunities

* Dublin Journal of Medical Science, Vol. X, p. 103.

for witnessing the disease in Great Britain were much more extensive than those of Dr. Lombard. I know not what account of his observations he may have published, in his own country, after his return. His paper written at Glasgow, after a residence of six months in that city and in Dublin, read before the College of Physicians in Ireland, contains very few facts of interest to the general question. Its leading object appears to be to gratify his Irish friends, by proving that the epidemic had not originated peculiarly in their country, as had been asserted by Dr. Lombard, but was as truly a Scottish, as an Irish, fever. In doing this, he incidentally describes some of its phenomena. He evidently regards the fever of Great Britain as the same disease as the fever of the Parisian hospitals, although, in a very large proportion of cases, it wanted the characteristic affection of Peyer's glands.

I have been thus particular in speaking of the statements and views of these gentlemen, because, having been trained to accurate investigation, and having come to the examination, with very strong anticipations of a different result from that which they ultimately adopted, they were peculiarly well situated to observe carefully, and to judge correctly; and their opinions might seem to claim an importance from the circumstances under which they were formed, to which they were not entitled, from any intrinsic value. But we are not called upon to receive the opinion of any one, however qualified he may be to form it correctly, any farther than it is

supported by the observations on which it rests. We proceed, therefore, to an examination for ourselves of the characteristics of the fever of Great Britain, as they are exhibited in the best descriptions that we can obtain.

The earliest notice that I can find, by any English physician, of affection of the glands of the ileum in fever, is by Dr. Bright, in his Report of Medical Cases.* He gives a brief history of ten fatal cases, with dissections, and figured illustrations of the morbid anatomy, of the several stages of disease, from simple enlargement of the glands, to ulceration, and cicatrization, and perforation of the intestine. Eleven other cases are added as examples of a proper treatment. It is manifest, that both the local affection, and the general disease, are identical in character with the typhoid fever of which we have spoken. These cases occurred in Guy's Hospital, ten in 1826, six in 1825, three in 1827, and of two the date is not given. Dr. Bright does not speak of the local affection, as universal in fever; but he expresses the opinion, that "the intestinal canal is almost always irritated, and that this irritation keeps up all the bad symptoms."† Dr. Bright's observations appear to have attracted very little attention. Some of them were made, as we have seen, as early as 1825, and they were published in 1827. Yet I have found

* Reports of Medical Cases, selected with a view of illustrating the symptoms and cure of diseases, by a reference to morbid anatomy. By RICHARD BRIGHT, M. D., F. R. S., &c., Lecturer on the Practice of Medicine, and one of the physicians to Guy's Hospital, Vol. I, p. 178.

† Ibid.

only two or three very slight references to them, in any of the authorities I have consulted on this subject; and so late as in 1830, it was not the practice, even in Guy's Hospital, to open the intestines in the examinations of patients who had died of fever.

In 1830, Dr. Tweedie published his "Clinical Illustrations of Fever;" containing the history of 73 fatal cases of disease that had occurred at the London Fever Hospital, in 1828 and 1829. In 54 of these cases, examinations were made. The result, as stated by himself is, that in 16 cases only, out of the 54, were ulcerations found in the mucous membrane of the small intestines, answering to the affection of Peyer's glands.* But this statement should not be received as authority, although it has often been quoted as such, without some scrutiny.

The London Fever Hospital, under the medical care of Dr. Southwood Smith, and Dr. Tweedie, receives all cases of febrile disease, including inflammations and the exanthemata, with the exception of small pox and measles. Dr. Tweedie's definition of simple fever is, "increased heat, accelerated pulse, thirst, general functional disorder."† A large proportion of the patients are the parish poor; and, in consequence of a regulation that each parish shall pay something for the support of its patients, many of them are received at a very late stage of disease, and under circumstances that render it impossible,

* Cyclopædia of Practical Medicine, article, *Fever*. By Dr. Tweedie, Vol. II, p. 181.

† Clinical Illustrations of Fever, p. 282, Boston edition.

without great care and trouble, to obtain any thing like a satisfactory history of its earlier progress. Doubtless many of these difficulties might be obviated, by a sufficient degree of attention; but they furnish reason for us to look beyond the general statement of the cases, that we may see with what degree of accuracy they have been observed and recorded.

On making such an examination, we find that the histories of the greater part of the cases are so incomplete, as to render it quite impossible to form any opinion of the character of the disease, independently of the examination after death; and in some, the uncertainty is not removed by the examination. Several patients were brought to the hospital in a dying state, and no account is given of their previous history. In regard to a part of these cases, no reason appears why they should be called *fever*, unless it be the accident that they were brought to a fever hospital, and died there.

I have made a somewhat careful analysis of the 54 cases; and, so far as the materials given afford ground for classification, the following appears to me to be a fair result. No more than 19 of them are cases of fever; eight are clearly cases of pneumonia, with extensive hepatization of one, and sometimes both lungs,—two of them with pleurisy superadded; one is pleurisy with little or no pneumonia; four are phthisis, with extensive tubercular disease in both lungs,—two in a softened state, one with numerous cavities, and one with ulceration of

the intestines,—in the other two, the surrounding portions of lung consolidated by inflammation; one is pulmonary apoplexy; one, gangrene of the lungs; four, inflammation of the brain, one of these should rather, perhaps, be regarded as hypertrophy of the brain; two, erysipelas; one probably scarlatina, though the history begins too late to make it certain; five, peritonitis, not caused by perforation of the intestine, of which there are two examples in the 19 fever cases; one, internal strangulation of the intestine from intussusception, producing sphacelus; one, inflammation of the cœcum; and six, are too imperfectly recorded to warrant any conjecture in regard to them.

Three or four of the cases that I have classed as fever, are somewhat doubtful, but I prefer to enumerate in this class, all that can with the least propriety be called fever, in any specific sense of the term. Two of these were complicated by inflammation of the lungs. In 13 out of the 19 cases, there were ulcerations in the lower part of the ileum. In five others, there is described inflammation of the mucous membrane of the same part, sometimes in patches. These appearances were doubtless caused by thickening of Peyer's glands, which are never mentioned in the examinations. In the remaining case, the abdominal viscera are said to be healthy, "excepting the mesenteric glands, which were enlarged, and partially affected with suppurations of a scrofulous character." Now it is well known that enlargement of the mesenteric

glands, especially with suppuration, is rarely, if ever found, without some disease in the part of intestine to which they correspond; and it is more reasonable to suppose, that an affection of that organ was overlooked in the general survey of the "abdominal viscera," than that so unusual an exception to a general fact existed in this case.

Nearly at the same time with Dr. Tweedie's publication, a treatise on Fever was also issued by his colleague, at the London Fever Hospital, Dr. Southwood Smith. In this are given the narratives of 104 fatal cases of disease, with the results of examination after death. Twenty-seven of the cases are the same, in each work. In 43 of the remaining 77 cases, there is notice of ulceration or other affection in the mucous membrane of the ileum. I have not thought it worth while to make an analysis of these 77 cases, like that to which we have subjected Dr. Tweedie's. They were selected from the same Hospital Records, and are, of course, subject to the same imperfections; and they have, besides, the additional disadvantage of having been selected in the illustration and support of a particular theory of fever. I think we are fully warranted in saying, both of Dr. Smith's and Dr. Tweedie's cases, that, instead of establishing any difference of character between the true fever of London, of the period in which they occurred, and the typhoid fever of Paris and of New England, they go as far towards proving its identity with them, as cases so imperfectly observed ever can go towards proving any thing.

It is to be regretted that Dr. Tweedie has not extended his observations by an examination of additional cases. In the article *Fever*, in the Cyclopædia of Practical Medicine published in 1833, we find him referring to the same 54 cases of his Clinical Illustrations, without any allusion to later observations, although in the mean time, the publications of Louis and other French pathologists, had drawn the attention of the whole medical world to this most interesting subject. With an experience of seventeen or eighteen years as physician to a well-appointed hospital, that supports 500 or 600 fever patients, or what is called fever, annually, and with his attention sufficiently drawn to the subject to have twice published elaborate essays upon it, he might reasonably have been expected to produce something more decisive of its character than the reports we have now examined. And yet I believe Dr. Tweedie is fairly entitled to the distinction of having done more towards the elucidation of this subject, by the publication of facts in regard to it, than any other English physician.

In the last eight or nine years, fever has prevailed in Great Britain, much more than for several years before. This new epidemic, as it may with propriety be regarded, began in Ireland and Scotland, chiefly in the larger cities and manufacturing towns, and soon after made its appearance in London. There can be no doubt, that in a large proportion of cases, it is destitute of the characteristic affection of Peyer's glands, which, as we have seen, is universal

in the typhoid fevers of Paris and New England; and common, if not universal, in the earlier fever of London. Whether it differs, also, in other respects, so as to constitute it essentially a different disease, or whether the difference exists only in regard to that affection, bespeaking rather an exception to the otherwise universal prevalence of it in a specific disease, is a question of great pathological interest.

That this affection is generally not found in the present epidemic, is confidently stated in general terms in many accounts of the disease, and in reviews and various other papers, although the detailed evidence of its absence is not so precise and accurate as we could wish. Dr. Perry, of Glasgow, states, as "the result of careful observation in upwards of 4000 cases" (1145 in the first seven months of 1831, and 3203, between November 1, 1833, and the end of 1835), "and 300 necroscopic inspections," that enlargement of the solitary glands, and ulceration of Peyer's glands, were found in about one-sixth of those who died, of what he, in common with most of the British medical writers, denominates contagious typhus.* But he gives us no particulars, either of his 4000 cases, or his 300 inspections, to enable us to judge how far he might be influenced in his observations by his theoretical views, or with what degree of care and thoroughness his examinations were made. Dr. Craigie, of

* Observations on Continued Fever, as it occurs in the City of Glasgow Hospitals. By Robert Perry, M. D., Physician to the Glasgow Fever Hospital. Edinburgh Medical and Surgical Journal, Vol. XLV, p. 64, Jan., 1836.

Edinburgh, has published three Reports on the fever, as it came under his observation in a part of the Royal Infirmary of that city. In the first, embracing the period from December 15, 1832 to August 1, 1833, he reports 104 cases of fever, and 16 examinations after death; in the second, for the year from October 25, 1834 to October 24, 1835, 174 cases, 24 deaths, and 12 examinations; and in the third, for the period from June 28, 1836 to February 12, 1837, 169 cases, 23 deaths, and 13 examinations. Some of the cases are given in detail, others are only stated in general terms. The three reports contain notices of 41 examinations. Peyer's glands were found to be affected in seven cases; in three of these there were ulcerations; in three, the intestines were not opened, and in 31, no morbid appearance was discovered in the ileum.*

In the winter of 1837–38, Dr. Charles West made some observations upon the fever of London, in St. Bartholomew's Hospital.† He had studied the typhoid fever of the continent, in Germany, and at Paris, and he carried out his observations in London, with a minuteness and care not often found in recent English pathological

* In this last number, several cases are included, in which nothing is expressly said of the condition of the intestines; but it appears from other circumstances stated, that they were examined. Edinburgh Medical and Surgical Journal, Vol. XLI, p. 257. Vol. XLVI, p. 1, and Vol. XLVII, p. 285.

† Some account of the Typhus Exanthematicus, as observed in St. Bartholomew's Hospital, London, in 1837–38. By CHARLES WEST, M. D., Graduate in Medicine and Surgery of the University of Berlin. Edinburgh Medical and Surgical Journal, No. 136, for July, 1838. Vol. L, p. 118.

investigations. He followed 60 cases through their whole history. Of these, 14 were fatal; and examinations were made in 10. The mucous membrane of the small intestines was more than usually vascular in five; the vascularity, in one, being extreme, but generally not intense; it was in patches corresponding to the situation of Peyer's glands, or near the cœcal valve. In one case, these glands were enlarged, and the solitary glands in two; but he never saw them ulcerated.

I am permitted also to refer to several observations of a young gentleman of this city,* who, after spending nearly three years in attending the hospitals in Paris, visited the London Fever Hospital, the last year, for the purpose of investigating the character of this disease. He observed ten fatal cases carefully through, and examined the appearances after death. Peyer's glands were affected in but one case.

In a paper by Dr. Stokes, of Dublin, "On the State of the Heart, and the use of Wine in Typhus Fever,"† I find notices of examinations of four fatal cases; in one of which there was enlargement, with some ulcerations of Peyer's glands. If to all these we add the three cases witnessed by Dr. Lombard, in which there was no affection of the ileum, we have an aggregate of 65 cases of examination of

---

* G. C. Shattuck, Jr., M. D.

† Researches on the State of the Heart, and the use of Wine in Typhus Fever. By William Stokes, M. D., M. R. I. A. Dublin Journal of Medical Science, for March, 1839, republished in Dunglinson's American Medical Library, Vol. III, No. 2. 1 Monograph A, p. 1.

the small intestines, in ten of which, Peyer's glands were found diseased, and in 55, they were not affected; corresponding very nearly to the proportion stated by Dr. Perry, as the result of his observations at Glasgow.*

The state of the spleen is noticed in but a few of the reports that I have examined. Dr. West found it enlarged and softened in six cases, and healthy in four. Dr. Craigie notices its enlargement five times in his third report, out of thirteen cases, and in the second, in three out of twelve. But it does not appear whether it was healthy in the remaining cases, or whether its condition was overlooked.

The morbid changes in the other organs are not uniform nor constant enough in either form of fever, to enable us to institute a satisfactory comparison between them. In general, affections of the head and those of the stomach are both more frequent and more severe, in the later fever of Great Britain than in that of France and of this country. But there is no one affection that is not occasionally wanting. Indeed, Dr. Stokes gives one case in which all were absent in the same case. "No organic lesion of any kind could be discovered in any part of the body." Dr. Stokes found the heart softened in three of his four cases, in two very remarkably. But the object of his paper had a particular reference to the state of that organ, and

* Dr. Staberoh saw the glands of the ileum affected five times, in Glasgow; but he omits to mention the number of cases in which they were found healthy.

it is not improbable, that the cases selected to illustrate it, exhibited that affection in more than the usual proportion. Softening of the heart is not mentioned in other reports, as a frequent occurrence.

The symptoms of fever in its several forms have so many things that are common to all, or that differ only in their degree of intensity, that it is not easy, by any description of them, to distinguish its various modifications with clearness. It is impossible to read the reports of the typhus of Great Britain without perceiving that it is a much more grave disease than the typhoid fever either of Paris or New England. Its course is more violent and rapid; the prostration, not only of the strength, but of the faculties, is more sudden and complete; the cerebral symptoms are more severe, or severe in a larger proportion of cases; the complications are more numerous and more severe, and it would seem, though the evidence is not, perhaps, very conclusive, that the mortality is greater. There are also some other marked differences of character; the eruption, especially, is widely different; and the derangements of the abdominal organs have more respect in general to the condition of the stomach, than to that of the intestines. Diarrhœa is much less frequent. Some of these symptoms we must notice more particularly.

Duration.—Dr. Mateer reports,* that the average term of residence in the Belfast Fever Hospital, of

* Dublin Journal of Medical Science, Vol. X, p. 32.

11,209 patients in 17 years previous to May, 1835, was 22 days; and by another table he shows that the average duration of fever before admission was about seven days, making the whole duration 29 days; and he estimates that one half of this term was occupied by the disease while on its increase, and the other half on its decline. It is worthy of remark, that the term of residence was three or four days shorter in the last three of the 17 years than in several of the earlier years, and somewhat less than the average, or than in any of the others. The average duration of 170 cases in the Edinburgh Infirmary, in 1834 and 1835, counting the days of illness previous to admission, and the residence in the Hospital, was 31 days,* and of 165 cases in the same institution, in 1836 and 1837, 25 days.† The average duration, ascertained in the same manner, of 186 cases of typhoid fever in the Massachusetts General Hospital, from October 1, 1833 to May 1, 1839, was 39 days. Of the five fatal cases reported by Dr. Stokes, the mean time of death was the 17th day of the disease; that of Dr. West's 14 cases, the 18th; that of 20 cases in Dr. Craigie's Report for 1833 and 1834, the 16th, and of 29 of those in 1836 and 1837, the 14th day. The duration of the fatal cases reported in this paper was ascertained in 21, and of these, the mean fatal day was the 33d. It thus appears that the fever of

* Dr. Craigie's Report. Edinburgh Medical and Surgical Journal, Vol. XLVI, p. 1.

† Ibid., Vol. XLVII, p. 285.

Great Britain is much more rapid than our own, both in the earlier termination of the fatal cases, and in the more rapid convalescence of the greater number who recover.

Cerebral affections.—The severity of the affection of the head is manifested by pain, stupor and confusion of mind, and delirium. All these appear as frequent symptoms of the typhus of Great Britain, but the number of each is not particularly mentioned in most of the reports. Dr. Craigie, in his second report, enumerates 99 out of 174 cases, as complicated with affection of the head, but without specifying the nature of the affection. Dr. West states that there was headache in all the 60 cases observed by him, where it was not masked by delirium or stupor; and there was delirium in 33, including all the fatal cases. Dr. Stokes reports delirium in 11 of his 19 cases. Of the 197 cases in the Massachusetts General Hospital, since October 1, 1833, delirium is recorded in 41, and headache in 164; 33 of these are included in each enumeration.

Mortality.—I have not data enough on this point to authorize a very confident conclusion in regard to it. Dr. Craigie, in his second report, records 24 deaths out of 174 cases, or one to every 7¼; and in his third report, the proportion is nearly the same. Dr. West reports 14 deaths out of 60 cases; one to 4½. Dr. Jackson reports in the Massachusetts General Hospital, 42 deaths in 343 cases, making one to eight. Since October 1, 1833, the proportion has been still less, 22 in 197 cases; one to nine.

Diarrhœa.—This symptom is not reported, so as to be available for the purpose of comparison, except by Dr. Stokes and Dr. West. The former reports six cases of diarrhœa in 19, and the latter 10 in 60. In general the diarrhœa was slight and continued but two or three days. It occurred in only three of Dr. West's fatal cases. Thirteen of the 60 were affected by constipation. In the typhoid fever of Paris, diarrhœa occurs in almost every case; and, as we have already seen, in our own fever, in 96 out of 197 cases. In the earlier English fever, 17 of Dr. Bright's 21 cases had diarrhœa; three of the others were admitted so short a time before death that the state of the bowels was not ascertained. Ten of Dr. Tweedie's 19 cases, which I recognise as fever, had diarrhœa,—three others probably,—and most of the remaining six either were free from it, or it had ceased before admission.

Eruption.—There is scarcely any resemblance between the little bright red rose spot of the typhoid fever, scattered thinly and sparingly over the front of the abdomen, and the abundant eruption of the typhus of England. This eruption, indeed, is not always uniform. Three varieties are described. One is the true rose spot; it seems not to be often if at all found alone, but to be occasionally met with, interspersed with the other forms. The second is of a papular form, somewhat confluent, and very generally spoken of, as resembling the eruption of measles. This is the prevailing form, the others apparently being little more than accidental. The third form

is petechia. The term *petechial* is often applied to the eruption *generally*, though somewhat inaccurately. Dr. Stokes, for example, speaks of petechial or maculated fever, indiscriminately. True petechiæ, however, are not unfrequently met with, generally, if not always, in connection with the papular form.

The eruption is abundant over the body, quite as much upon the back as in front, some reports say more, and presents itself as a prominent feature of the disease; insomuch that some writers call it typhus exanthematicus; others use the term eruptive fever, and one at least regards the eruption as of itself a sufficient diagnostic mark to distinguish this from other fevers. It generally appears from the 6th to the 8th day, often as early as the 4th, and never later than the 10th. Whereas rose spots in the typhoid fever never begin earlier than the 6th day, rarely before the 7th or 8th, quite often as late as the 12th or 15th, and sometimes later than the 30th. Its manner of going off is also different. It fades in two or three days, but dies away slowly, leaving a stain behind, which sometimes is visible a fortnight or more.* The appearance of the eruption brings with it no appreciable change of the other symptoms; and its abundance or scarcity has no obvious relation to the severity of the individual cases. Even the appearance of petechiæ is not particularly unfavorable.

I am not able to state very fully in what propor-

* Dr. West on Typhus Exanthematicus, p. 140.

tion of cases the eruption is observed. Dr. Cowan found at Glasgow, in one year, from November, 1835, to October, 1836, that of 2257 patients, 1669 had eruption, and 580 were without it.* Dr. Staberoh reports 1103 cases in the same city, in five months, in 1836, of which 844 had eruption, and 259 were without. Dr. Craigie mentions it numerically only in his third report, in which it is said that 79 out of 169 had eruptions. Of Dr. West's 60 cases, 42 had the "measles-like" eruption, and in five there were petechiæ also. All of Dr. Stokes's 19 cases were "petechial," or "maculated;" but, as I have before remarked, these cases were selected to illustrate the effect of a particular remedy, and not as examples of the usual state of the malady.

But while it thus appears that the two diseases differ much from each other, in many of their general features, it is no less true that in individual cases, it is sometimes impossible to distinguish them, by the phenomena during life. Both Dr. Lombard and Dr. Staberoh acknowledge the surprise they felt at not finding in the intestines the appearances of typhoid fever, such as they had seen on the continent, in cases in which the previous symptoms had led them to expect them confidently. The gentleman, to whom I have before referred, has more recently made the comparison under favorable circumstances; and although he could commonly predict in what

* Review of Cowan's Vital Statistics of Glasgow. Edinburgh Medical and Surgical Journal, Vol. LI, p. 537.

cases these appearances would or would not be found, it was not always so. Of the cases reported, very few are given in sufficient detail to furnish data for any opinion on this question. It would seem, that, excepting perhaps some more prominent symptoms of abdominal derangement, differing more in degree than in character, the cases in which Peyer's glands have been found enlarged or ulcerated, were not essentially unlike others in which no such affection was discovered. This point, however, has not received much general attention. It is by no means certain that further and more careful observation may not discover marks of distinction which shall be appreciable in all cases during life. If it should be otherwise, it is no more than what happens occasionally in regard to other diseases, of a character obviously distinct in their nature and origin.

It is not impossible, perhaps not improbable, that further investigations may discover a common origin for all the forms of fever, and distinguish the several modifications that occur, as varieties of the same general disease. But in the actual state of knowledge, which is the only sound basis for our opinions, for the time being, it seems more reasonable to regard as distinct diseases those which are characterized by a marked difference of phenomena, and of pathological appearances. In this point of view, I think we are warranted, in considering the recent typhus fever of Great Britain as a different disease from the typhoid fever of France and New England, and of England itself.

Our information is not sufficiently full and complete, to authorize a very confident opinion on the subject, still less to explain all the difficulties that attend it. There is little room to doubt that the earlier fever of England, as seen by Dr. Bright and Dr. Tweedie, was the true typhoid; and it is by no means improbable that some cases of the same disease still occur, in the midst of the other, while many more, perhaps, are in a greater or less degree modified by a complication of the two.

We have the example in this country, of the prevalence of two fevers of essentially different characters, in the same places, and at the same periods of time. The prevailing, but not the sole, fever of New England, is the typhoid. In the more southern and western parts of the country, other forms of fever prevail; while the typhoid is only occasionally witnessed. In the Middle States, the several classes of fever are more equally met with, either indiscriminately, or in different epidemics. This point has been very fully and satisfactorily established in regard to the fevers of Philadelphia, by Dr. Gerhard.* He has often observed in that city the true typhoid fever, with its characteristic affection of the intestinal glands. But in the remitting and bilious fevers from the southern coast, this affection is entirely wanting. It was also absent in an epidemic which prevailed extensively among the poor of Philadelphia, in the

* On the Typhus Fever which occurred at Philadelphia in the spring and summer of 1836. By W. W. Gerhard, M. D. American Journal of the Medical Sciences, Vol. XIX, p. 289, and Vol. XX, p. 289.

spring and summer of 1836, of which Dr. Gerhard has given a full and able account. His observations in that epidemic extended to nearly 250 cases, and to about 50 examinations after death. In one case only were Peyer's glands at all affected; and in that the symptoms had been of a doubtful character.

This disease Dr. Gerhard proposes to call *typhus* fever, in contradistinction from the typhoid fever, which has formerly been included in the same designation. It differs from that, not only in wanting the characteristic affection of Peyer's glands, but also in the violence and nature of its symptoms, and in more frequent and severe affections of the stomach and liver, and perhaps the spleen, as well as in being liable to graver and more frequent complications, with diseases of the head, and of the heart and lungs. The character of the eruption is different, resembling, so far as it is possible to compare it by description alone, that of the typhus of Great Britain. Indeed, the disease is, in all its most important features, the same with that, and as such it is rightly regarded by Dr. Gerhard.* It was less frequently complicated with typhoid fever. Dr. Gerhard, as we have seen, found but one case of this complication in 50; while about one sixth of the recorded cases in Great Britain

* Since the publication of his papers in the American Journal of the Medical Sciences, Dr. Gerhard has had opportunity to establish, still more fully, the identity of the typhus of Philadelphia with that of Ireland, by the observation of a considerable number of cases, in emigrants recently arrived from Ireland. More than 30 cases of this sort came under his care in the summer of 1837; and they presented all the distinguishing features of the disease before described by him.

exhibited it. There may perhaps be a reason for this difference in the greater tendency to typhoid fever in the latter country in ordinary seasons. But we have not facts enough on this subject to make it expedient to pursue the inquiry here.

I have already intimated that fever occasionally occurs in New England, of quite a different character from the typhoid. Such fevers have recently been seen among us only in sporadic cases, except perhaps in a few localities; and most frequently in persons who have just returned from a more southern climate. In the hottest season of the year, a few cases are sometimes produced by indigenous causes. They are easily distinguished from the typhoid fever during life; and the examinations after death show as great a difference in the anatomical appearances, as exists between the English and French fevers. Five or six such cases came under my own observation during the last summer. They were all mild, and as the patients recovered, there was no opportunity for anatomical investigation. But the nature and course of the symptoms marked it as a different disease from our ordinary fever, with a clearness not to be mistaken. Whether this fever is to be regarded as the same as the typhus of Philadelphia and of Great Britain, or whether it is still another form of fever, allied to, or identical with, the bilious fever of more southern climates, and distinct from typhus, are questions upon which I am not disposed at present to enter.

A single case, much more nearly resembling the

English typhus, occurred at the Massachusetts General Hospital, in December, 1836, in a young man who had recently come from England, and was attacked with fever about the time of his arrival in America. He had been ill four weeks when admitted, and was then delirious. His delirium was more violent than is common in typhoid fever; and continued till his death. He had no diarrhœa, not much apparent tenderness of the abdomen, no meteorism; no sudamina, nor rose spots; but a red eruption over the abdomen of a different character. He died the 13th day from his admission. There was some effusion of serum in the arachnoid; the lungs and the heart were healthy; the mucous membrane of the stomach was softened, apparently cadaveric, that of the small intestines stained at the lower part, and a little softened; Peyer's glands, not diseased, except that one or two patches were a very little softened; large intestines healthy; liver and spleen of natural size and healthy.

We may, I think, now regard it as established, that the true typhoid fever is marked by rose spots on the abdomen, and the affection of Peyer's glands in the intestines. As diagnostic signs, therefore, these appearances are of the highest value; since they enable us, generally during life, and always after death, to ascertain with entire confidence, the character of the disease in which they are observed.

The question next arises, What degree of importance shall be attached to them in a pathological point of view? What influence have these affections,

or either of them, in producing or modifying the general symptoms of fever. In England, the affection of Peyer's glands is almost universally regarded merely as an accidental complication of fever, of no more consequence to its general character than inflammation of the lungs or the stomach. In France, on the contrary, especially by many of the pupils of Louis, it is considered as the chief cause of all the phenomena, without which they cannot be produced. I do not perceive that M. Louis himself has any where distinctly expressed this opinion. But the manner in which he uniformly speaks of the affection as the essential characteristic of typhoid fever, certainly countenances it. The truth doubtless, as in many other cases, lies between.

That the affection is something more than an accidental occurrence, is apparent from the mere fact of its universal prevalence. This prevalence, indeed, has been denied by the English physicians; but, as I think we have sufficiently shown, a more full examination of their own diseases would prove that they are in error; and that the affection is found, whenever it is properly looked for, in true typhoid fever.

On the other hand, it is not easy to believe that an inflammation in the ileum, of so small an extent as is often observed, should be capable of giving rise to all the variety of symptoms that are frequently seen in that fever. At a later stage, when the disease of the intestine has proceeded to ulceration, it is not difficult to account for its influence. In

regard to perforation, there can be no doubt of its agency; and independently of that, there is much ground for the opinion suggested by Dr. Bright, that many of the leading symptoms are kept up by the irritation of the intestine, either directly, or by its sympathetic effects. But ulceration rarely if ever is found before the twelfth day, while many of the most active symptoms of disease, headache, dizziness, general pain, &c., are often present at the very beginning. In a large proportion of cases, especially those in which there is no delirium, the general symptoms are on the decline, at the period when it should seem, from anatomical researches, that the affection of the glands is constantly advancing.

These glands are also affected in other diseases: and, although those diseases have so little affinity with typhoid fever, that the fact of a kindred affection causes no embarrassment in diagnosis, we might reasonably expect to see some analogous effects in them, if its influence in this were so important as has been supposed. It is true that in phthisis the appearance of the ulcerations is somewhat different, but the organ affected is the same, and the immediate consequence, diarrhœa, is often the same, and yet the symptoms that accompany it in the general system are most unlike. In the affection of teething children, the case is still stronger, for both are acute diseases, and the course and appearances of the local derangement are perfectly similar.

We are not therefore to regard the affection of Peyer's glands as the cause of the other symptoms

of typhoid fever, but as an effect with them of some common cause, the true character of which remains still to be discovered. It will facilitate the investigation of that cause, to keep in mind a right view of what has been already done. If we prematurely imagine the whole question to be settled, we of course take away the inducements to further inquiry. It is much to have advanced so far, as to have obtained some fixed points, resting upon indisputable facts, that are not liable to be removed by any successive change of opinion. The influence will be highly important in all future pathological investigations, in respect to other diseases as well as to fever.

The question remains, Of what avail is the knowledge of the disease of Peyer's glands, in the treatment of typhoid fever? It certainly does not bring us information of any sure method of cure. The local inflammation and ulceration are no more under our control, than are the other symptoms. This knowledge, however, does serve to explain many phenomena of the disease, and many effects of remedies which could not be so well understood before. It serves to guard us especially against inappropriate, irritating medicines, such as were formerly in use, in the expectation of arresting the progress of fever. So long ago as 1827, Dr. Bright said he had "almost always found that the small doses of antimonial remedies usually administered as a part of the diaphoretic plan in fever, do harm, where any decided tendency to irritation of the

bowels exists."* Up to a very recent period, if it be not so in some places even now, it was a common practice to give not only antimonials, but irritating cathartics, not occasionally to evacuate the intestines, but daily, and several times a day, to "break up," or arrest the progress of the disease, or to cure diarrhœa,

* Report of Medical Cases, Vol. I, p. 185. The recommendation of antimonials in Dr. Jackson's Report on Typhoid Fever, is limited with so much care, as scarcely to bring them within the implied prohibition of Dr. Bright's remarks. He does, however, recommend their use, and suggests the inquiry, whether the omission of them, with that of other active treatment, might not have been the cause of the greater mortality and increased duration of the disease in the two or three last years of the period, to which the report applies.[1] The suggestion was certainly a natural one, founded upon the facts as they stood at the time. But a continuance of the report to the end of 1838 would materially change the aspect of the facts. It must be observed, that the apparent comparative want of success from the less active practice was not fully known at the time. Consequently, the treatment has continued up to the present time, to be quite as mild certainly, as at any former period, perhaps even more so; not from any particular concert between the several physicians, but in consequence of the opinion entertained by each, that a very active treatment, beyond a proper attention to the state of the stomach and bowels, and to local inflammation, when that exists, is not well adapted to cure the disease. The number of deaths in 343 cases, prior to the end of 1835, was 43,—nearly one in eight; or, taking the numbers in which the character of the disease was more strictly ascertained, which is the fairest for the present comparison, it was as follows, viz.:

Year	Cases.	Deaths.	One death in	Year.	Cases.	Deaths.	One death in
1822	1	0		1829	25	1	25
1823	5	0		1830	14	4	3½
1824	15	3	5	1831	29	2	14½
1825	18	2	9	1832	23	4	5¾
1826	26	3	8½	1833	37	6	6⅙
1827	19	3	6⅓	1834	34	6	5⅔
1828	22	2	11	1835	35	6	5⅚

In 14 years, 303 cases and 42 deaths, one in 7¼, very nearly; and in the last four years, one in six.

[1] Report on the Typhoid Fever. Massachusetts Medical Communications, Vol. VI, p. 111.

by removing the supposed cause of irritation. Surely a knowledge that this cause was inflammation in the intestines, would do something to improve such treatment. It teaches, too, and enforces, the necessity of a mild and unstimulating diet, during a long convalescence, as well as during the more active period of the disease.

But perhaps the most important practical lesson derived from this knowledge, consists in the caution which it imposes to abstain from attempting too much by active treatment. Inflammation, it is well known, after it has become established, must go through a certain process, before it can terminate in health. If typhoid fever, therefore, be inseparably connected, as it assuredly is, with a process of this sort, so that the patient cannot be restored until that process is completed, it is apparent, that violent, persevering efforts to arrest the disease, after it has

---

The three succeeding years exhibit the following result, viz.:

Year.	Cases.	Deaths.	One in
1836	59	6	10 nearly.
1837	29	0	0
1838	20	1	20
Total,	108	7	15

In the two years, from November, 1836, to November, 1838, there was a succession of 55 cases of the typhoid fever, without a single death; and the case in which death then occurred (and there has been no death since) was in so advanced a stage at the time of admission, that the result, strictly speaking, could have no bearing upon the question of treatment. It is manifest, therefore, that the greater mortality in the years 1832—1835, must have been produced by some other cause than the difference of practice. The true cause of difference is, doubtless, the difference in severity of the same disease in different periods.

fairly begun its course, cannot be successful. They may do much harm, by increasing the irritation and inflammation; but it is scarcely possible that they can do good. We may allay the general irritability of the system, we may watch against the attack of unfavorable symptoms, we may soothe the irritated state of the intestinal canal, and sometimes, perhaps, moderate the severity of its local inflammation; and thus contribute greatly, both to the comfort and the restoration of our patient. In the beginning of disease, before the process of inflammation is fully established, we may, perhaps, do more, and by early removing the causes of irritation, prevent its formation, and cut short its course. It is only then that active remedies can be used with benefit, or even with safety. If persevered in at a later period, they may exhaust the patient, but they will not subdue his disease.

Suffer me, in conclusion, Mr. President, to congratulate you, and the Society, on the continued advancement of our Institution in prosperity and usefulness.

The number of members who have connected themselves with the Society, during the past year, is 60, being, with one exception, more than have joined it in any previous year of its history. The present number of Fellows is 678, including 62 retired members, who retain all the privileges of fellowship, although released from some of its obligations. The number who have died during the

year, so far as I have been able to ascertain, is but six. Two of them were retired members, at the ages respectively of 86 and 74 years; four were at the active period of life, two of them respectively at the ages of 32, and two at 38 years.* Our profession cannot claim for its members, any more than for its patrons, an exemption from the general law of humanity. But it is a striking proof of the general healthfulness of our pursuits, notwithstanding all the fatigue, and care, and responsibility which attend them, that in a whole class of adult men, the annual proportion of deaths should be no more than one in 113. A few are taken away, to remind the many who remain, to renew their activity in the fulfilment of the duties of their station here, and in preparation for the enjoyments of a higher station hereafter.

NAMES.	RESIDENCE.		ÆT.
* John Stone, M. D.,	Springfield,	Sept., 1838,	74
Joseph W. Valentine, M. D.,	Charlestown,	Nov., "	32
Edward Frost, M. D.,	Wayland,	Nov., "	38
Martin Phelps,	Chester,	Dec., "	86
Charles Walker, M. D.,	Framingham,	Jan., 1839,	32
Joseph W. McKean, M. D.,	Boston,	April, "	38

Vol VI
pp 251 — 364

ARTICLE VII.

ON FRACTURES.

By A. L. PEIRSON, M. D.,
Fellow of the Society.

[Read at the Annual Meeting, May 27, 1840.]

Mr. President and Gentlemen,

We are met in compliance with our time-honored custom of passing an hour together in the contemplation of some topic appropriate to our medical employments;—one hour in the year, which has no rivalry to stimulate, no jealousy to embitter, no perplexities to distract, no recompense to be toiled for; and yet it is an hour which, at each annual revolution, brings with it mingled emotions. It tells our younger brethren they have ascended one more step in the rugged and toilsome path of professional life; and to those who have reached its culminating point, it teaches, there is a decline as well as an ascent. It shows us the vacant seats, and calls to mind the absent forms, of

those whose course in life is run, and who are to mingle in the throng with us no more.* But, above all, it cannot fail to bring us a complacent satisfaction, in finding ourselves in the interchange of a social greeting with so large a number of those engaged in pursuits which all mankind deem to be useful, benevolent, and honorable. May the mutual respect, which is engendered here, go with us to our homes, and soften the asperity of professional competition, and diminish the violence of professional collision!

In looking for a subject to present to your minds to-day, I have sought no untravelled path. Nor shall I flatter myself that I can much augment your stock of knowledge. Mr. Hunter was accustomed to aver, that "he was not so big a fool this year as he was last;" and if we have been as fortunate in this respect as the great physiologist, the honest views and faithful experience of any one of us, on the most common practical topics are worthy of attention. I have endeavored to arrange my thoughts on the subject of *Fracture*; as being one of universal interest to the profession, and not because I have new views to offer, or new practice to recommend. Mr. Abernethy, in his Hunterian lectures before the Royal College of Surgeons, boasted that "he would tell the big wigs how to make a poultice;" and I hope my hearers will not be startled, if I should imitate this celebrated English surgeon, in offering some equally homely, but I trust useful, precepts on an important practical subject.

---

* See Note A.

There is a chaos of knowledge on the subject of fracture; and yet, if an inexperienced man were to read the record of it all, his very next case of fractured limb might puzzle him. The varieties of fractures are endless, but the principles which should regulate us in their treatment are few and simple.

Definition.—Fracture is "the separation of a bone by violence into two or more parts."* The phenomena which follow this accident vary according to the office of the injured part. When bones constitute a part of the apparatus for the performance of a function, as in locomotion where they are the levers on which the muscular forces act, their solution of continuity necessarily suspends or greatly impedes this function. While, on the other hand, the fracture of bones destined to contain and preserve important organs, as the bones of the head, spine and thorax, may produce destructive injury of these organs, or may take place without in the smallest degree endangering the integrity of the contained parts, or diminishing their capacity to perform their usual office. Instant death *may* follow the fracture of a bone, as where the fractured cranium causes laceration of the cerebral pulp or effusion from torn arteries; or where fracture of the odontoid process of the second cervical vertebra produces compression of the origin of the nerves of the diaphragm and other respiratory muscles. The importance of fracture depends likewise on the part of the bone in which the fracture is found, whether near to or distant from a joint; on its direction, whether

* Young.

transverse or oblique; on the degree of displacement and its cause; on its complication with other injuries of the same bone or neighboring parts; and, finally, on the age and health of the patient.

Bone is formed by the deposite of phosphate of lime by arterial action. This process, and the corresponding one of absorption, continue through life; and their relative activity at different periods of life varies the constituents of bone, and modifies the circumstances of fracture, as well as the rapidity of the restorative processes. In youth, the process of deposition overbalances that of absorption, and the bones grow more and more dense, while if fracture occur, the fibrous tissues still abound to a degree which tends to prevent a separation of the earthy parts, and the fracture is rendered incomplete. In adult life, the equilibrium between absorption and deposit is established, and the density of the bone remains for a time stationary. In old age, the balance is again destroyed, the nutrient arteries are wholly or in part obliterated, the absorbents continue their action, the whole body diminishes in weight, and the bones, especially, grow lighter, thinner and softer, so as to present a mere shell, sometimes capable of being cut with a penknife, which in healthy adult life would make no impression. The prevalence of the softer tissues in infancy gives rise to an injury which is very frequently met with at this time of life, and which requires the same treatment as fracture. This is *bending* of the bones, like whalebone, or rather like the breaking of cornstalk where the fibrous tissues do not give way.

The fragility of bone is sometimes greatly augmented by disease; in which case the softer tissues are absorbed and the earthy particles lose their cohesion. Fabricius Hildanus relates a case of fracture of the fore-arm, caused by the drawing on of a glove!

The disturbance of the constitution, occasioned by the processes of restoration connected with fracture, is usually moderate. But it is far otherwise with the sympathy of the system created by inflammation occurring in large joints. Hence arises the general rule with regard to fractures of the extremities, that they are more important the nearer they approach to the articulating surfaces.

The direction in which a fracture takes place depends mainly on the direction of the force applied to produce the fracture. Oblique fractures are for the most part accompanied with displacement, and with laceration of the surrounding soft parts. The nature of the force applied also determines the nature of the fracture as to the number of fragments, whether simple or comminuted. Notwithstanding the great number of pieces into which a bone may be broken, complete ossific union may unite them all again. This has been known to take place when their number has amounted to twenty. The obliquity of fracture may be so great as to split a bone longitudinally. This no doubt is a very rare accident, although some indubitable instances of it have been recorded.

The displacement between the fractured portions of bone, is occasioned in part by the direction of the force applied to produce the fracture, but mainly by

the action of muscles inserted into the separated portions.* In the bones of the extremities, particularly the lower, the greatest thickness of the muscles being on the posterior and internal aspect of the bones, and their insertions being into the inferior fragment or those parts attached to it, the upper fragment almost invariably overlaps the lower, thereby causing a seeming projection, which disappears when the more movable lower fragment is restored to its original position. It is practically important to know that the efforts at reduction are to be made upon this latter portion which alone is displaced. In transverse fractures, the displacement is less than in the oblique, and in the separation of an epiphysis, which is a fracture of the broadest part of a bone, the displacement is often so little as to allow of the function of the part being still performed.

Kinds of Displacement.—Displacement of the fractured portions of bones may take place either by retraction, rotation or twisting, overlapping, flexion or altering the direction of the axis, and by slipping in a lateral direction so that the axis of the two portions does not form a continuous line. The above enumeration of causes may be all combined in a single

* A remarkable proof of this fact is furnished in the case quoted by Breschet from the clinique of Dessault. A patient falling from a height fractured the femur so as to shorten the limb. The next day the shortening of the limb had disappeared, but it was found that he labored under paralysis of the inferior extremities and bladder. By the application of moxa the paralysis was cured, and immediately on the muscles resuming their contractile power the shortening of the limb reappeared.

instance. We will consider these modes of displacement in detail.

I. *Retraction.*—Displacement by retraction takes place when one part of a bone remains fixed and the other portion is left free to move in the direction of the muscular fibres inserted into it. Instances of this are found in fracture of the patella, of the olecranon, of the os calcis, and of the cervix femoris. Indeed it is maintained by some authorities, that the retraction which causes the displacement is the efficient cause of the fracture, and that the fall which usually accompanies the accident is a consequence of the injury, and not, as is commonly admitted, the cause.

II. *Overlapping.*—The displacement by overlapping is a modification of the foregoing. The force with which the muscles act in oblique fractures sometimes occasions a retraction which deeply wounds muscular parts, and even penetrates the skin. It sometimes happens that from the combined action of the muscular forces, and the weight of the body in attempting to use the limb, the pointed bones are thrust through the skin, and even into the substance of adjacent bodies. A seaman was brought under my care, who forty-five days before, while at sea, had fallen from the main-top-sail-yard upon the deck of the vessel, fracturing the humerus obliquely. The superior fragment penetrated the skin, and after ploughing a furrow in the plank half an inch deep and two inches long, was finally broken off in it. On my first visit, this fragment, which was about three inches long, was presented to me, which the captain assured me he had much

difficulty in extracting, two days after the accident, from the plank in which it had buried itself. The final consequences of the accident were, after the patient's recovery, anchylosis of the elbow, shortening of the humerus, partial anchylosis of the shoulder joint, and displacement of the fragment of the fractured scapula.

III. *Rotation.*—The rotation of the lower fragment of a bone upon its axis, is a form of displacement of the utmost consequence to be considered. In fracture of the femur especially, the weight of the foot produces a constant tendency to this displacement, generally by turning outward.

IV. *Flexion.*—The long bones when fractured are liable to form an angle at the place of fracture. This is the most common of all deformities after recovery. The angle thus formed is almost always projecting anteriorly, and is occasioned by the action of muscles which cover the posterior face of the bone. If the inclination of the angle is but slight, it does not retard the cure.

V. *Lateral sliding.*—In transverse fractures, *without* shortening, the fragments are not always in opposition. This is sometimes the effect of the force producing the fracture, and sometimes caused by the action of muscles. The difficulty of counteracting this displacement is much less than in that caused by overlapping.

CAUSES OF FRACTURE.

Various morbid changes render the bones less capable of resisting the forces which continually act

upon them, as age, rickets, cancer, &c. The principle may be stated generally, that whatever interferes with the nutrition of bone, by which the cohesion of the softer tissues of bone is diminished, becomes a predisponent cause of fracture. The form, length, and office of some of the bones likewise dispose them to this accident.

The efficient causes of fracture arise from force violently applied. This is either *immediate*, as in the case of projectiles, whereby most of the comminuted fractures are occasioned; or by *counter-shock*, as in falls and blows, in which the part that receives the blow is not that of the fracture, which occurs in some more distant part. A sudden force applied in the direction of the axis of a long bone, tends to bring together the extremities of that bone, and the fracture takes place usually in the middle third, where the circumference is least, its density greatest, and its curvature most salient. It is most generally admitted, on good authority, that fracture may take place by the mere action of muscles.

SYMPTOMS OF FRACTURE.

No one of the physical or sensible signs of fracture is constant. In a bone not much buried in soft parts, and before tumefaction has commenced, the best diagnostic sign is an inequality in the outline of the bone perceptible to the sight and the touch. Next may be accounted crepitation between the fragments, then distortion of form, and, lastly, pain and the loss of voluntary motion. Crepitus is sometimes produced

by the friction of articulating surfaces composing the joints when in a morbid state, or when the synovia is inspissated, and pain, swelling, immobility and distortion may all be symptoms of dislocation and of contusion. On the other hand, when fracture exists, the displacement may be so slight as not to interfere at the time with the function of an organ,—as in the separation of the epiphysis of the tibia, which does not prevent the patient from walking; or so great that the fractured extremities cannot be brought near enough to produce crepitation, as when fracture of the cervix femoris occurs with shortening. A surgeon will not easily be mistaken in fracture of the long bones, who accurately compares their length, their form, and their capacity for voluntary motion; and if to these he adds crepitation when it can be felt, his diagnosis is secure. It should be remembered, that in doubtful cases the patient is safer with an uncertain prognosis, than with a cruel and protracted search for certain proof. And it may be well to caution some over-zealous diagnosticians that when there is no discernible fracture, it is not indispensable to their credit or the patient's recovery, that they should make one.*

* The learned reader will be reminded that the lash of the Roman satirist was applied to this class of officious observers.

"Lanquebam: sed tu comitatus protinus ad me
Venisti centum, Symmache, discipulis.
Centum me tetigere manus Aquilone gelatæ,
Non habui febrem, Symmache, nunc habeo."
Martial, 9th epigram, 6th book.

By taking considerable liberties with the original, the last two lines may be *surgically* rendered thus:

I had no fracture, skilful leech, till you,
By your rude handling, broke the bone in two.

Prognosis.—In regard to the prognosis of fracture, danger to life may arise under several circumstances.

I. Fracture may occur in the diseased, the debilitated, or the aged, in whom the vital processes during a state of health are carried on so feebly that they will not bear the additional interruption occasioned by the pain, irritation and confinement of fracture. In the aged, especially, where the organs of circulation have become diseased in their structure, there is danger, lest after a long recumbency, a change to the erect posture should suddenly throw a burden upon the heart too great for its contractile powers, and instant death might ensue. It is a practical caution, worthy of being remembered, not to let the aged, during treatment for surgical accidents, lie too long upon their backs in a horizontal posture, and to bring them gradually to an erect position.

II. In the case of inebriates, the complication with delirium tremens makes even the simplest form of fracture a dangerous disease. I have known the death of such a patient to be occasioned by his uncontrollable efforts to walk during the first week of treatment for an oblique fracture of the tibia. I have known abscess and sphacelation of the soft parts, occasioned by the insane struggles of such a patient to extricate his limb from counter-extending splints.

III. Fractures are more dangerous as they are more complicated with wounds of the soft parts which communicate with the open air. Thus a bone splintered by a shot from firearms is more hazardous than the same degree of comminution would be, if occasioned by crushing the parts without external wound.

IV. Fractures involving the joints are dangerous from the constitutional symptoms which for the most part follow upon inflammation of articular surfaces. Other circumstances being equal, the fracture of bones by direct force is more dangerous than fracture by counter-shock.

As regards the favorable or unfavorable termination of fracture where life is not endangered, non-union, artificial joint, anchylosis, shortening and deformity, are more apt to occur in oblique than in transverse fractures; in those occurring near the joints, especially if complicated with luxation, than in those which take place near the middle of the long bones. The more a bone is surrounded with muscular fibres, the more certain and rapid is its consolidation. The less the injury inflicted upon the periosteum, the more rapidly do the restorative processes go on. Suppuration and gangrene are more apt to follow after comminuted fractures. Finally, the state of the patient's general health and constitutional vigor greatly influences the ossific processes. There are some peculiar constitutions, which, although vigorous enough in all other respects, have an inaptitude to ossific union of broken bones.*

MODE OF UNION.

Callus.—The cicatrization of divided bones is effected by the formation of a new substance called callus, which forms a bond of union between the fragments, at first of a fibrous or fibro-cartilaginous

* See Sir EVERARD HOMES's paper, Transactions of a Society for Medical and Chirurgical Improvement, Vol. I, p. 233.

consistence, but ultimately of a greater density, and containing a larger proportion of earthy constituents than natural bone. In the reproduction of bone, the more dense are more easily regenerated than the spongy. The cranium, after the removal of bone by the trephine, is rarely united by perfect ossification. The first bond of union in fractured bone is the same as in all solutions of continuity by violence in soft parts, viz., the fibrine of the blood. This does not necessarily depend on the extravasation of blood caused by laceration, but is furnished by all the parts concerned in the injury; by the broken ends of bones, by medullary tissue, by the torn periosteum, by the lacerated cellular membrane and muscular fibre. These all pour out either blood or some of its constituents, the serum and coloring particles of which being speedily removed by absorption, the plastic fibrine is left enveloping the injured parts. The phenomena of inflammation now begin to appear in a greater or less degree. Coagulable lymph is thrown out, by which the surrounding bond of union is rendered more adhesive. The periosteum becomes tumefied and very vascular, changes which have caused a much greater agency to be attributed to this membrane in the formation of bone than probably belongs to it. The experiments of Mr. Syme, however (Transactions Royal Society, Edinburgh), put it beyond a doubt that the periosteum can take upon itself the office of secreting bone, independently of the bone itself. For when the periosteum of a bone

of the animal experimented upon, was carefully raised and a plate of metal inserted beneath, a layer of osseous matter was found, after the lapse of a considerable time, covering the metal which was laid between the periosteum and bone, and consisting of a bony deposit in the periosteum. The exudation furnished by all parts in the neighborhood of the broken fragments is at first of a gelatinous consistence. Next, that part which is nearest to the fractured fragments is converted into a fibrous cartilage. While this is going on, the ends of the bones are softened, so that crepitation disappears before union has taken place. If the fragments of bone are not distant from each other, this provisionary exudation surrounds their extremities in one mass or lump; but if there are several portions at considerable distances, each has a separate provision of fibrinous exudation, which may or may not reach the nearest of the other fragments. The medullary cavity of the injured part of the bone is also filled with this same substance. As early as the fifth day from the time of the fracture, red vessels begin to be discovered, proceeding from the surface to the centre of the mass. The vascular organization of this incipient provisionary callus is the source of the ossific deposit by which the bony union is finally established. This tumor of callus, as it is sometimes termed, commences, not from the face of the fractured ends, but from the sound bone at a little distance from the ends of the fragments, forming a casing or ferule around the outside of the parts involved in the fracture, within which mass the rest of the process of union

goes steadily on. The medullary cavity now gradually contracts, and is at length obliterated by a deposit of the same exudation, and a layer of ossification begins to be formed within the cavity of the bone as well as on its exterior, the thickness of each layer gradually increasing till they conjoin. Last of all, the medullary cavity is again restored by absorption, which leaves only some osseous septa. Absorption continues to go on for many months after the parts have become strongly united, until the superfluous parts are wholly trimmed off, and the restored parts approach in form nearly to their original shape. During this last period, the muscular and aponeurotic fibres surrounding the fracture begin to be united to the newly formed bone. After ossific union is completed, there remains a mark which has been compared to the line denoting the union of the epyphysis to the shaft of a long bone.

The natural history of callus has occupied many acute minds, and given rise to numerous theories and experiments. Among the most instructive experiments on the subject, are those of Villermé,* performed upon dogs. From these we learn, that the *first* period, or that of effusion and adhesive inflammation closely embracing the fractured parts, lasts from the first to the sixteenth day. The sharp points of bone begin to soften and round off not before the tenth day.

The *second* period may be reckoned from the sixteenth to the twenty-fifth days, during which the fragments are buried in a sort of knot, consisting of a

* Dictionnaire des Sciences Medicales, art. *Cal.*

fibrous or fibro-cartilaginous mass. During this period, from the seventeenth to the twenty-fourth day, the tumefaction from extravasated blood and lymph, which has involved the surrounding parts in a reddish colored homogeneous mass, begins to lessen from without inwards, and the distinction begins to be defined between the muscles and the subjacent parts. During all of this period the elasticity of the callus allows of correcting by moderate pressure any deviations from a proper direction. It is remarkable how little pressure will suffice to produce great changes in soft bone. An acquaintance with this fact, and a moderate application of ingenuity, might have remedied the deformities in the union of many a fractured bone. Dupuytren was often able to accomplish this as late as a month after the accident. A beautiful illustration of the fact I have mentioned, is witnessed in the operation for harelip, in very early infancy, where the union of the soft parts, by a very gentle traction, causes the cleft portions of the os maxillare superius to approximate and finally to coalesce. Attention to this fact, likewise, will show that it is of more consequence to keep the fragments in exact opposition during the third and fourth weeks, while consolidation is going on, than during the first and second week, while the intermediate deposit is the only substance to be acted upon by motion.

The *third* period is that of ossification, which lasts from the twenty-fifth to the ninetieth day from the accident. The ossific process originates from two places at the same time. One is the external surface

of the fibro-cartilaginous callus whence the calcareous deposit advances inward; the other is the medullary cavity, whence it advances outward. In their progress, the two divisions pass through the intervening space, are identified with each other, and the whole distance is converted into bone. The process much resembles the conversion of cartilage into bone in the sternal cartilages of the aged. If muscular fibres and fragments of membrane are interposed between the fractured extremities of bone, they become speedily absorbed. It is obvious that when bones overlap so that the fractured ends entirely pass the place of the fracture, the process of ossification will be modified. The callus, being thrown out from the uninjured parts of the bone, the central portion or plug furnished from the medullary cavity will be unnecessary and will be found not to exist; and, finally, the soldering together by the callus thrown out is permanent and does not allow of the distinction into provisional and definitive callus. Specimens are preserved in museums, where the junction of the fragments is effected by a bridge of bone, which does not in the least degree involve any part of the bone concerned in the fracture.*

The *fourth* period can hardly be regarded as having any distinct boundary to mark it from the preceding. It is the termination of the process of restoration, by what is termed a definitive callus; for the conversion of the provisionary callus from a fibrous or fibro-cartilaginous consistence to bone, is not the final termin-

* Amesbury, Observations on Fractures.

ation of ossific union. The ossific callus still supports the fragments much in the same manner that the splints applied by the surgeon have done, by embracing the divided parts; while the portion of callus between the fractured extremities, which may be supposed to act as a sort of cement, is capable of supporting but a small degree of violence. For an indefinite period after the firmness of the callus has given as much strength to the bone as it possessed before the fracture, this interposed bond of union is growing more and more dense, till at length its compactness gives it the resemblance of enamel or ivory, rather than bone. When this stage is completed, the bond of union is denominated the definitive callus.

The views which the above-mentioned experiments of Villermé support are essentially those which later writers entertain. As I do not know a subject in surgery on which it is more difficult to obtain clear ideas from reading, than the formation of callus, I shall, even at the risk of being charged with repetition, offer the following as a succinct statement of what is held on the subject by the highest modern authorities.

1. Immediately on the occurrence of a fracture, the minute vessels of every part concerned in the injury begin to furnish either blood, fibrine, or lymph, which constitutes a gelatinous material filling all the vacancies occasioned by laceration, and completely enveloping the portions of bone requiring repair.

2. This intermediate deposit becomes gradually converted into a fibro-cartilaginous bond, in which are early deposited specks of bone, by degrees more and

more multiplied, till a new bony tissue envelops the fragments without and plugs the medullary cavity within. To this bond is applied the name of provisionary callus; and it is to provisionary callus, when it has acquired sufficient firmness, that we trust the use of a limb during the first period after recovery from fracture.

3. Lastly, a portion of this callus, especially that which lies between the fractured extremities, acquires additional hardness, or, as it is termed, becomes eburnated, and the bond of union is the definitive callus. A period of eight months or more is required for the completion of this change, during which the superfluous portions of callus are removed by absorption.

From this account of the formation of callus, it is very obvious, that the exact time of complete union or continuity of osseous tissue between the fragments cannot be determined. For all practical purposes, the time of union may be considered as bounded by that period when the fragments will bear the application of moderate force without causing motion between them, and the patient can begin to suffer the ordinary action of the muscles upon the injured part. Popular belief, sanctioned by the generalization of medical men, has placed the average time of union, in the long bones of the extremities, at forty days. Experiments on animals place it between the twenty-fifth and ninetieth days. I have endeavored to deduce it from a tabular view of all the cases of fracture which have been received into the Massachusetts General Hospital since its foundation.* The difficulty of arriving at

* See Note C.

a knowledge of the necessary facts from these documents is greater than I had supposed. The early records are frequently defective as to the exact day of union, as well as in the particulars of age, &c. Thus, out of 367, the whole number of cases of fracture, but a small proportion could be used for analysis. By adopting the rule of dating the day when union is effected, from the time when union is recorded to be "good," "perfect," patient able "to stand" or "walk," and similar conclusive evidence, I have found that the average period of union, in thirteen cases of simple fracture of clavicle, is 21.15 days. In ten cases of simple fracture of the humerus, the average period of union is 26.50 days. In thirty-five cases of simple fracture of tibia and fibula, the period of union is 35.08 days. In thirty-five cases of simple fracture of femur, the average period of union is 37.62 days, or, dropping one remarkable case, in which the union, from some unknown cause, was protracted to one hundred and eight days, the average for thirty-four cases is 36.25 days.

In regard to the influence of particular circumstances on the time of union of bone, in cases of simple fracture, the following are some of the results of analysis. First, as to age.

1. *Clavicle.*

In seven cases under thirty years of age, the average time of union was 20.85 days. In six cases over thirty years of age, the average time of union was 21.50 days. Average of the whole thirteen cases, 21.15 days.

2. *Humerus.*

In six cases under thirty years of age, the average time of union was 25.16 days. In four cases over thirty years of age, the average time was 28.50 days. Average of the whole ten cases, 26.50 days.

3. *Femur.*

In eighteen cases, thirty years of age and under, the average time of union was 35.88 days. In seventeen cases, upwards of thirty years of age, the average time of union was 43 days, or taking out a remarkable case of union delayed one hundred and eight days, the average time was 36.64 days, while the general average of the whole was 51.29 days, or, omitting the above protracted case, 36.64 days.

4. *Tibia and Fibula.*

In eighteen cases of thirty-one years and under, the average time of union was 32.33 days. In seventeen cases, upwards of thirty-one years of age, the average time was 38.64 days. General average of thirty-five cases, 35.08 days.

5. *Tibia alone.*

In six cases under forty years of age, the average time of union was 23.50 days. In six cases of forty years and upwards, the average time was 31.33 days. General average of twelve cases was 27.41 days.

6. *Fibula alone.*

In eight cases of thirty-two years and under, the average time of union was 22 days. In eight cases

upwards of thirty-two years, the average time was 30.87 days. The general average of sixteen cases was 26.43 days.

7. *Patella.*

In three cases under thirty years of age, the average time of union was 58.33 days. In three cases of thirty years and upwards, the average time was 23.33 days. General average, 58.33 days.

Thus it appears, that in all cases except those of fractured patella, there is a remarkable uniformity as to result in the influence which the age of the patient exerts in fixing the period when union takes place, the average time of union being shortest in the younger class of subjects. In regard to the influence which is exerted by the sex of the patient, the comparatively small proportion of females among the hospital cases does not admit of satisfactory comparison. In five cases of fractured tibia and fibula among females, the average period of union is 29.60 days, nearly three days less than that of the youngest class of the whole number of cases.

In fractures complicated with suppuration, the mode of union differs. In this case, granulations spring up from the osseous tissue, which coalesce and form a nidus for the reception of calcareous deposit, which afterwards proceeds as in cases accompanied only by the adhesive form of inflammation.

TREATMENT.

It is the duty of every good surgeon at all times to wait upon nature, "*Minister natura et interpres est.*"

But more especially is this true of the treatment of fractures, where all that art can do, is to effect the coaptation of divided parts and guard against accidents. The rest is purely a natural process, which receives no aid from art. The story which is told of an insane man under treatment for fracture of a leg by an unskilful surgeon, is an instructive one, and if not true, deserves to be so. Finding that the apparatus which had been over-carefully applied was painful and annoying, he dexterously shifted it to his sound limb, and tearing a hole in his bed, thrust the injured limb among the feathers. The surgeon at his various visits finding every thing properly adjusted, prognosticated a favorable issue, and at the end of thirty days taking off the dressings, exhibited the sound limb perfectly straight and fair, and displaying, as he thought, indubitable evidence in the success of the treatment, to attest to his own skill and knowledge; when, to his astonishment, his patient drew out the other leg, the injured one, from among the feathers, a little crooked to be sure, but equally firm and sound.

The treatment of fracture is the same in principle as that of wounds of soft parts. The injury of the softer textures which enter into the composition of bone, may be so slight, even where the earthy parts of the bone are completely separated, that they may unite again by adhesion, and with so slight an inflammation as to be hardly noticeable. This is perfectly analogous to the union by the first intention of incised wounds, and yet the inexperienced surgeon feels by no means the same confidence in committing the

injured bone to that *vis medicatrix* to which he trusts so implicitly in the simple incised wound. He partakes somewhat of the popular trepidation and hurry to which the fracture of a bone gives rise, and which attributes so much efficacy to the mysterious process of "setting." In the case of incised wounds, no important organ being injured, he examines with care, arranges with deliberation, and adjusts with tenderness and firmness. But let a long bone be broken, and all is bustle and confusion. The examination is hurried, under the idea that delay is dangerous, the extemporaneous dressings are imperfect, applied perhaps with the intention of substituting more complete ones when time will admit. This is all unnecessary precipitancy. There is time enough in every case to dispose of all essential particulars. The bed, the apparatus, the position, may be carefully and accurately regulated, and the chances of success in the treatment of the fracture be none the worse for the necessary delay.

As in the reunion of bones the requisite treatment is purely of an *expectant* character, the surgeon's duty may be said to have been discharged when he has removed all those circumstances which tend to retard the natural operations. This duty presents us a threefold indication.

I. The replacement of the separated fragments.

II. The retaining of them in their proper position till united by bony union.

III. To prevent accidents, and combat symptoms of constitutional disturbance.

IV. Subsequently to the union, the indication arises to remove the injurious consequences resulting from the injury, or from the necessary treatment.

First indication.—To replace the separated fragments of bone, we apply a force operating in exactly the opposite direction from that which caused, or that which maintains, the displacement. Besides this, we apply the hand to the place of fracture, to effect a more perfect adjustment of the fragments. It is easy to mark the *tactus eruditus* in these manipulations. No greater difference between skill and clumsiness can be shown, than in the handling of a broken limb. The hand of experience is firm, confident, humane, while resolute, in applying an adequate force; while that which is not directed by competent knowledge is timid, unsteady, torturing to the patient, and leaving its purpose uneffected.

In fractures of the long bones of the extremities, the reduction is effected by extension applied to the inferior fragment, and counter-extension to the trunk of the body. A general rule insisted on in French practice, is not to make the application of the extending power to any part of the fractured bone, but rather to the next bone below. Thus, in fracture of the femur or humerus, the extending force should be affixed to the leg or to the fore-arm. But it is obvious that this rule must often, in its application, conflict with the following, which stands high in English practice, viz., that in effecting the reduction, as well as in maintaining it, the position of the limb is to be so adjusted, that, if it be possible, all those muscles which have

their origin or insertion in the lower fragment should be relaxed by flexion. In general, a great force is not necessary to reduce a fracture, but rather a moderate power, continued for a period long enough to overcome the resistance of the muscles. It is sometimes necessary to weaken the retractive strength of the muscles, by producing syncope and nausea, by means of bloodletting and contrastimulants. In those cases where all the extending force that can be applied fails of effecting a reduction, there can be no doubt that it is most judicious to leave the limb in a flexed position, with a view to diminish the resistance which provoked the muscular fibres to action. In general, this will be found to have subsided after the first twenty-four hours.

Second indication.—To procure immobility of the fragments is the means to be relied on to maintain reduction. The first agent to be considered in producing this condition is *position;* and attention to this agent is most frequently neglected. There is no doubt that the great majority of fractures would unite perfectly well without applying apparatus, if the bones could be placed in a position where they would remain perfectly still. The nature of the bed on which the patient is to be placed, deserves a minute attention from the careful surgeon, in order to secure and maintain a favorable position. Where a hair mattrass can be placed on a straw bed, this furnishes the best arrangement. Fresh straw is the next best material, and feathers the worst. In all cases where no proper fracture-bed is provided, it is expedient to place above

the bedstead and beneath the bed a level flooring of boards. The French luxury of thin mattrasses of lightly carded wool, to place above the bed of hair or straw, is almost unknown in this country, but would be a decided domestic improvement, as a substitute for unwholesome feathers. In selecting a bed, a narrow one is preferable to a wide one. The fracture-bed of Mr. Amesbury, a triple inclined plane, is so simple a contrivance, and possesses so many advantages in the treatment of fractures, especially those of the lower extremities, that every practising surgeon would find it worth his while to keep one for the use of his patients.

II. But in most cases of fracture of the extremities, position alone will not maintain the apposition of the fragments. The application of splints to the surface of the injured parts is almost universally necessary. In this application we imitate nature in the process of reparation of fracture, for the callus thrown out around the fragments is a sort of natural splint. Great care is necessary in the adjustment of the artificial support of a broken limb, to prevent motion between the fragments. To make the pressure equal in every part, the inequalities of the limb must first be fitted with soft compresses, and the whole limb where the splints are to be applied, reduced to an even, conical cylinder. I know nothing more convenient for this purpose than carded cotton, or, where only a small quantity is needed, folded compresses of cotton or linen cloth. There is this advantage in using cloth, that it may be applied wet, by which a more

perfect and neat adjustment of the apparatus may be effected. Having used the greatest circumspection in guarding every part from injurious pressure, and having adjusted the fragments satisfactorily, the splints should be suffered to remain untouched for a period of at least twenty days, occasionally fitting the ligatures which confine them. Two sets of splints, an inner and an outer set, are necessary, especially for fractures of the inferior extremity, the outer set performing the office of a fracture-box. The inner splints should be of a light material, moderately flexible, and should extend, when practicable, the whole length of the fractured bone. They should surround the limb as near as may be without touching each other. Straw, whalebone, leather, pasteboard, are materials possessing the requisite properties; but thin strips of wood, with or without a lining of cloth or leather, and scored lengthwise by an incision two-thirds through their thickness, are most convenient and accessible. The outer splints should be two in number, of light, firm, thin boards, a quarter of an inch in thickness for the adult femur, and a little wider than the diameter of the limb. It is *desirable* that these outer splints should extend beyond the articulating extremities of the broken bone; it is *indispensable* that they reach beyond one of these extremities. The mode of applying these outer splints is to roll them into the two extremities of a splint-cloth of firm texture and a little wider than the length of the boards, till they meet in the middle, then unfolding them sufficiently to receive the limb, already fitted with inner splints, they are to be secured

with tapes. The limb thus secured is to be placed in a situation to give the greatest ease to the patient, which will be a moderately flexed one. There is another mode of dressing which has been gaining favor of late, and which presents some important advantages, that may be availed of in suitable cases, although I do not think a general reliance can be placed on starch bandages in all cases even of simple fracture. The following is the mode of applying this, which is called the immovable apparatus. Pasteboard, of the quality used by book-binders for the covers of books, soaked in hot water to a pulpy consistence, is carefully fitted to the limb by turns of a roller-bandage, and constitutes, when dry, a perfect mould of the part. Board-splints in a splint-cloth are to be kept on the outside of the pasteboard till the apparatus becomes nearly dry. A few turns of a roller soaked in common starch are first to be applied to the limb; over this is laid the softened pasteboard, also smeared with common starch, and over all many turns of a starched roller, occasionally laying on more starch with the hand or a brush. Something more than twenty-four hours is required for the drying of this apparatus. When perfectly dry, it constitutes a complete coat of mail for the injured part, and where the swelling and inflammation are moderate, nothing can exceed the comfort and security of this arrangement. In simple fractures of children, it supplies the place of the watchfulness and discretion which otherwise would demand so much of the physician's and nurse's time. Indeed, when there is no inflammation, and the appa-

ratus is perfectly dry and hard, the patient moves himself about without fear, and even bears the weight of the body on the broken limb at the end of a week, although, as no possible advantage can arise from such attempts, they are to be discountenanced. The advantages and disadvantages of this now fashionable mode of treatment may be thus briefly stated:—

ADVANTAGES.

1. The starched apparatus insures the most entire immobility between the fragments.

2. It is not expensive, and is perfectly accessible to private practitioners.

3. It cannot get displaced by the awkwardness or imprudence of the patient, and is therefore peculiarly convenient in infancy.

4. In a much greater number of instances than is the case with any other treatment, it allows of the patient being carried into the open air for exercise in a carriage or otherwise, a circumstance sometimes indispensable to the health of the patient. It allows, likewise, a more speedy removal to those who meet with fractures while absent from home. In fractures of the superior extremities of children, under the application of this apparatus, they may for the most part be trusted at school.

DISADVANTAGES.

1. It requires in its application more skill and judgment as to the degree of pressure which is allowable than any other method. An error of either

more or less than sufficient is likely to defeat the intentions of the application, and there is no mode of remedying defects but by an entire re-application.

2. It allows of no inspection of the parts during cure, and, of course, prevents our guarding against the visible effects of pressure.

3. If applied during a swollen state of a limb, it becomes loose, and entirely unfitted, as soon as the swelling subsides. This tumefaction, in cases of fracture, is very commonly present in the muscular parts, immediately after the accident.

4. There is abundant evidence of most disastrous effects having arisen from its use.* The effects of the too great pressure of the immovable apparatus have been:

a. Prevention of the provisional callus, which is found not to be furnished in some cases, where the fragments are too closely pressed together.

b. Complete sphacelation of a part or of the whole limb below the compressed part.

c. But a more common injury is a painful affection of the nerves, and loss of power in the muscles of the part subjected to pressure, which is only removed after a considerable length of time, so that the inability to use the limb is much more lasting than after the cure by other methods. On the whole, the immovable apparatus, although affording the discreet practitioner with a beautiful mode of treatment for a limited number of cases, can never supersede the use of

* American Journal of Medical Sciences, No. 70, p. 401.

the more generally adopted and safer applications. I have spoken only of the use of common domestic starch to prepare the immovable apparatus; but other glutinous substances can be substituted. The French preparation called dextrine is in common use in hospital practice, and possesses the valuable properties of mixing extemporaneously with cold water, and of drying very speedily.*

III. Position, bandages and splints are not always to be relied upon in securing the requisite contiguity of the fragments. When this is the case, it becomes necessary to have resort to permanent extension of the limb, by which the retractive action of the muscles is subdued. This is one of the most difficult points in the treatment of fractures. The application of this principle is chiefly necessary to the oblique fractures of the inferior extremity. A very moderate force, constantly applied, is less irritating to the muscles than a force to greater extent causing pain. In a properly constructed fracture-bed, the leg being secured over an inclined plane, the weight of the body becomes an extending force. By this arrangement, the benefit of the flexed position can be secured. In this class of fractures, however, the majority of surgeons are in favor of the application of Dessault's splints, or a modification of them, which requires the limb to be kept in a straight position. In hospital practice, the success of this mode of treatment is very striking; but in private practice, the results which I

* See Note B.

have witnessed are far less satisfactory. It must be recollected, that fractures are the accidents to which the poor man—the laborer—is most incident, in whose dwelling we cannot always command the requisite watchful attendance. The injuries produced by long splints extending from the pelvis below the foot, and making pressure on the ramus pubis, and by a laced sock or handkerchief bearing upon the instep, are sometimes very severe, even in those cases in which the apparatus has failed of preventing the shortening of the limb. One of the best modes of counter-extension is that devised by the late Dr. Nathan Smith, of suspending a weight over a pulley to a cord affixed to the lower fragment. In very young subjects this counter-extending force is seldom necessary, as moderate pressure soon overcomes the resistance of muscular contraction.

Third indication.—To obviate the accidents occurring during the treatment of fracture, we have several rules to be observed:

1. In all severe cases, complete rest of the whole body should be observed.

2. A full diet, in a previously healthy subject, is never to be allowed; but such restrictions are to be insisted on as will lessen the tendency to local inflammation and febrile excitement.

3. The great majority of simple fractures go on perfectly well with no local application after the first dressing; and it is a very desirable point to leave the first dressings untouched for a fortnight. The incessant dreeping of a broken limb, with what are called

evaporating lotions, is, in most cases, filthy and unnecessary. The alternations of wet and dry produce contractions and expansions of the bandages and compresses, and promote the liability to erysipelas of the skin.

4. When local inflammation is severe, the best remedies are leeches and cataplasms, or warm fomentations. The bandage of strips allows the application of these remedies without disturbing the position of the limb. The depletory effect of cataplasms and fomentations, as accessory to topical bleeding, is not sufficiently valued. The amount of fluid which escapes from the exhalents under their use, is very considerable. They are accessible remedies, even in the humblest private practice.

5. The nervous system is peculiarly apt to be disturbed in fractures, and requires the judicious use of opiates, to lessen its irritability, and subdue the spasmodic contraction of muscles.

Fourth indication.—After the consolidation of a fracture, the member is not usually restored to its natural state. Stiffness of the articulations, rigidity and atrophy of muscles, œdema and swellings, are often present in a greater or less degree. A neuralgic affection of branches of nerves which have suffered compression by the dressings, sometimes proves a troublesome and distressing complaint. After the removal of the splints and bandages, the injured part should be suffered to remain at rest for a few days, in order to allow the circulation in the capillaries to resume its natural course. The attempt to use a

fractured limb too soon, is always accompanied with pain and swelling. Fomentations, vapor baths, showering with tepid water, frictions, and passive exercise, will aid in this process. Finally, the articulations recover their freedom by a persevering use of them. In stiffness of the elbow joint, the swinging of a weight in the hand—a practice recommended by Fabricius Hildanus—is worth remembering.

The vast variety of complications which may exist in cases of fracture, cannot be comprehended in one general rule of practice. Excessive contusion,—comminution of the fragments,—open wounds of the soft parts,—injuries of articulations, call for their appropriate treatment, independently of those arrangements adapted solely to the broken bone. The question of amputation, in cases of compound fracture, is one of the gravest that can be offered for our consideration. It is a question which must be referred to sagacity and long experience, the decision of which cannot be reduced to rules. When such a degree of injury of soft parts, crushing of the muscles, laceration of integuments, fascia, and the fibrous tissues of joints takes place as to render sphacelation inevitable, the sooner amputation takes place the better; no time should be wasted in allowing febrile action to be developed in the system. On the other hand, comminuted fractures, with laceration, happening to the young and vigorous, will often tend to a favorable termination, although appearances were at first against it. This is particularly true of those compound comminuted fractures of the superior extremities, caused

by explosions of gunpowder. The experience of many of my audience will doubtless recall instances in which the obstinacy of a patient has preserved a limb, crushed and lacerated in a manner apparently hopeless. In these cases, where the attempt is made to preserve the limb, all straight confinement is to be avoided, the loose fragments are to be removed, the reduction of bones attempted by the most gentle means only; and when these are unsuccessful, the reduction must be postponed till the tumefaction has in part subsided. The part should be covered with a cataplasm of bread and water, and enveloped in oiled silk, or some other impervious substance, to prevent the drying up of the cataplasm. This sort of patient surgery is often blest with a happy result.

In oblique compound fractures, an accident sometimes happens, which requires the interference of art. A pointed extremity of bone makes its way through the skin, and, on making extension, the reduction is opposed by integument, fascia or muscle interposed between the fragments. The obvious rule of practice is to saw off the pointed end of bone, and divide the bands which create the stricture, in the longitudinal direction of the bone. The suppurations which follow these contused fractures are often extensive, and demand great care to provide sufficient counter openings to drain off the deposits of pus, as nothing is more likely to defeat the process of ossification than the constant maceration of the fragments in pus.

Fracture and luxation, without external wound, are sometimes found combined, and occur from the union

of a direct force with counter-shock, or from a succession of blows, operating in different directions. In such cases, the indication of treatment is to secure the fragments from motion till the provisionary callus is strong enough to bear the application of a force sufficient for reduction. This will usually take place in six weeks.*

NON-UNION.

In a certain proportion of cases, the re-union of bone is not effected. Very rarely does this arise from internal constitutional causes; more generally it is the result of some local circumstances, incompatible with the process of ossification. The state of pregnancy has been regarded as unfavorable to the union of fractures. There can be no doubt that some instances have occurred to favor this opinion. Such cases are recorded by Fabricius Hildanus, and others. But these cases are rather to be regarded in the light of exceptions, than as conforming to the general rule. My own experience, and that of my hearers, will furnish the recollection of many fractures in which a state of gestation produced no obstacle to a regular and perfect union. A scorbutic diathesis is an internal cause which not only hinders the right formation of callus, but, in some instances, during long sea voyages, has been known to occasion a reversed action of vessels, by which union already formed becomes absorbed, and bones, long united, separate. The effect of cancerous, rachitic and syphilitic diseases in

* See Boston Medical and Surgical Journal, Vol. I, 1828–29, p. 12.

preventing union of bones, has, I think, been overrated. I have seen repeated instances of rapid consolidation in bones so diseased as to be broken by a very small degree of force. The ossification of a fracture is sometimes prevented by a foreign body, which keeps up a constant discharge of pus from the part. This is sometimes a detached splinter or exfoliated scale of bone. When this is withdrawn, healthy granulations spring up, and consolidation is speedily effected. The bones of the fore-arm seem to possess some peculiar property, which renders them liable to be the subject of non-union more frequently than the other long bones.

Too great freedom of motion is the common cause of want of union between fractured bones. Too great a distance, also, between the fragments defeats their union. There are, also, certain bones which, from something in their tissue, not well explained, seem to have a natural inaptitude to ossific union. These are the cervix femoris, the patella, the os calcis and the olecranon. The action of muscles attached to these bones is a main cause operating against their coaptation; but even when this is overcome, the bond of union between the fragments is of a fibrous instead of an osseous tissue.

In cases of non-union, the condition of the fragments may be permanently left in either of two conditions, that of artificial joint, properly so called, where the ends of the bones are covered with a cartilaginous deposit and synovial membrane, allowing easy and free motion; or there may be between the ends a

flexible, fibrous band, interspersed with spiculæ of bone. As, in all cases of fracture, inflammation seems to be a process necessary for the effusion of callus, in non-union the principal indication is to produce, in the adjacent parts, the necessary degree of inflammation. Blisters and friction have been resorted to, to rouse the dormant energies of the parts; but the most efficient means has proved to be the passing a seton through the place of unnatural union. It is well known that this practice was first recommended and successfully adopted by the late distinguished Dr. Physick. Of late, an ingenious mode of union, by passing silver wire through a hole bored in the fragments, and twisting it together, has been recommended, and is worthy of trial. But, unfortunately, in the most important of these cases of non-union,—that of the cervix femoris,—no such remedy can be applied, and a hopeless separation of the fragments must be submitted to.

We are now prepared, in some degree, to consider the peculiarities presented by fractures of the different bones, in their causes, symptoms, diagnosis and treatment.

I. *Bones of the Cranium.*—The head is particularly exposed to fracture, both from falling bodies and from falls, in which this part is brought to the ground, or in contact with other bodies. These, as well as all other wounds of the head, are healed more speedily, other things being equal, than wounds in other parts. Fractures of the flat bones require no peculiar treat-

ment, and are only important as they involve injury to the brain and its investing membranes. It is worthy of note, that, by a beautiful provision of nature, callus is not here thrown out, in the work of repair, with the same profusion as in fractures of the extremities. It is obvious that, if such were the case, nearly every fracture of the cranium would be fatal, by the pressure of the dense callus upon the brain. In many solutions of continuity of the flat bones of the cranium, where parts have been removed by the trephine, and otherwise, there is no attempt at ossific union, but a membranous expansion shuts up the opening. By the same causes, the facial bones are liable to be broken, and afford a vast variety of opportunities for the exercise of surgical ingenuity. The proper treatment, in all cases, is to restore the separated bones to their proper contact, and retain them there. I have seen the bones of the entire face, lower jaw and all, broken off from the cranium proper, by a sharp body of great weight falling upon the junction of the nasal bones with the os frontis. Very severe injuries of these bones may be sustained without fatal consequences, unless the fracture extends through the body of the sphenoid bone, or otherwise injures the base of the brain. The lower jaw is much exposed to the causes of fracture. The action of powerful muscles attached to every part of it, tends greatly to displace the fragments; but we have, fortunately, in the situation of the teeth, the best means of counteracting this tendency. A piece of annealed wire can be drawn tightly around the two nearest teeth in the

two fragments, which produces a retentive apparatus as effective as it is simple. Besides this, a pasteboard splint can easily be fitted to the outside.

A wagoner was crushed, by the passing of the wheel of his loaded wagon over the lower jaw. A double fracture was occasioned, and the detached portion of bone, with the tongue, was forced down the throat, so as nearly to occasion suffocation. The accident occurred in the night, but, fortunately, near a house, whose inhabitants were awake; and the patient obtained the loan of an iron spoon, with which he contrived to drag the tongue forward, and prevent the impending suffocation, till I was enabled to secure the fragments by wiring the teeth. Great swelling followed, preventing deglutition for many days; but the patient, being supported through an œsophagus tube, eventually recovered.

II. *Vertebræ.*—The spinal column represents a single long bone, and every sufficient force applied, tending to bring together its two extremities, may cause fracture of one or more vertebræ. In fracture, with displacement of the vertebræ, the symptoms vary with the part of the column injured. If above the fourth cervical vertebræ, as in fracture of the odontoid process, death usually ensues immediately, from compression of the origin of the phrenic nerve, and other nerves, supplying the organs of respiration. If below the third, but still above the origin of the nerves forming the axillary plexus, paralysis ensues in the superior extremities. Paralysis of the lower extremities, of the rectum and bladder, of the muscular coat

of the intestines, producing a tympanitic abdomen, follows upon displacements of lower portions. A man 21 years old fell from a tree, at the height of 15 feet, and struck his head upon the pavement beneath. His head was bent down upon his chest, and the weight of his body brought a strain upon the cervical vertebræ. A severe laceration of his scalp was the most obvious injury; but he constantly asserted that his "neck was broke." I could discover no perceptible crepitus, by the slight movement which I dared to make; and there was, at first, no paralysis. After death, which occurred 22 hours after the accident, three of the cervical vertebræ were found fractured, and their intervertebral substance crushed and comminuted. The remarkable symptoms in the case were the absence of paralysis, till within two hours of death, the undisturbed state of the intellectual functions, and the patient's own consciousness of the real nature of the injury under which he was suffering.

The treatment of fractured vertebræ is limited to producing motionless rest, and obviating the symptoms of inflammation and irritation which may arise, by appropriate means. A proposal has been made from high surgical authority, to cut through the dorsal muscles, and raise depressed portions of bone in fractured vertebræ, which has been acted upon several times unsuccessfully, and is now justly condemned by most judicious practitioners.

III. *Sternum.*—Fractures of the sternum are comparatively rare. Its elasticity and spongy texture, its support, in forming with the ribs part of an elastic

circle, and its dividing the shock of any violence communicated to it, between its several pieces and the cartilages of the ribs, constitute its best defence. Men have been drawn, by machinery, through an aperture incredibly narrow, and yet escaped without fracture, by the operation of these conservative causes. When simple fracture, without displacement, takes place, no serious symptoms are to be apprehended; but comminuted fractures, and those attended with depression, may inflict fatal injury on vital organs within the chest. The trephine is applicable to raise the depressed bone here, as well as in the cranium.

IV. *Ribs.*—The very great strength of the ribs, derived from their form, elasticity, and the elasticity of their cartilaginous extremities, renders their fracture, in early life, not a very common accident. Immense weights have been borne upon the sternum, by strong men, without fracture of the ribs; and the common sports of boys exemplify the great power of resistance possessed by the thorax. But after age has increased their fragility, they are not infrequently fractured by blows and falls. The intercostal muscles balancing each other, tend to prevent lateral displacement of the fragments; and the general distension of the lungs, when inflated, tends to prevent displacement in any other mode.

The middle ribs are most exposed to be broken, as the shoulder and clavicle protect the superior, and the inferior have greater mobility and less length. The ribs are frequently broken in two places, especially when the fracture is caused by a counter-shock. In

the case of an old man, whose body became entangled in machinery, I found eleven ribs broken on one side, and six on the other, each of the latter fractured in two places. The application of a bandage, to prevent the motion in respiration, and the abstraction of blood to relieve the dyspnœa, are the only curative indications. Fractured ribs sometimes unite by lateral contact. This occurs near their posterior extremity, where displacement is sometimes occasioned by the action of the dorsal muscles. In the case of an old man whose ribs had been fractured by the wheel of a chaise passing over him, the union of two contiguous ribs left an opening, through which the integuments were protruded, in the form of a large tumor, by the hydrothorax, which, some years afterwards, caused his death.

V. *Pelvis.*—The thick, strong bones of the pelvis are rarely fractured; and when this accident occurs, it is from a force so violent that the most serious consequences generally follow. The falling of a bank of earth, of heavy bodies used in erecting buildings, being run over by loaded wagons, and the force of projectiles, are the common causes of fracture of these bones, by which extensive contusions of the external soft parts, painful compressions of nerves, and dangerous effusions and lacerations within the pelvis, also, are occasioned. The diagnosis of these fractures is difficult, from the thickness of the surrounding soft parts. The fracture is not always to be looked for in the place of the force applied, but it may be effected by counter-shock, in some other part of the circum-

ference of the pelvis. A blow on the pubes or ilium may cause a fracture of the ischium, or lateral portions of the sacrum. In very severe injuries, it is rather to be looked for that fractures will be found to have taken place both from the direct force and the counter-shock. In the treatment of these accidents, our curative plans are limited to absolute rest, in a position to allow of the greatest relaxation of the muscles, moderate pressure of a bandage round the hips, secured by straps over the shoulders and under the thighs, and moderating by proper treatment the local inflammation and general constitutional disturbance. Mr. Arnott's hydrostatic bed affords a most useful means of promoting the cure, and alleviating distress. The progress of internal abscesses and effusions is to be carefully watched, and an early outlet provided for their discharge, and that of the splinters of bone which may be thrown off. An unfavorable prognosis is justified in the majority of severe cases.

VI. *Scapula.*—Fractures of the shoulder-blade are not common, although more frequent than those of the pelvis. The apophyses and neck of the bone, being more exposed to the contact of opposing bodies, are more frequently broken than the body. The crepitation of the fragments points out the nature of the affection, in almost every instance. The diagnosis is more difficult in case of fracture of the coracoid process, the part being deeply seated, and the contusion and tumefaction around it usually great, as nothing but a strong force, directly applied, will cause this fracture. The fractures of the body of the bone,

which I have seen, have been occasioned by falls upon the elbow, by which the humerus is forced strongly upward, and the scapula gives way about its middle. The only treatment required, is to keep the arm immovably fixed to the trunk, by a simple bandage; and, in fractures of the apophyses, to elevate the elbow sufficiently to retain the fragments in opposition.

VII. *Clavicle.*—From its curved form, its position and its peculiar office, fracture of the clavicle is one of the most common accidents to which the bones are liable. They are exposed to direct causes of fracture, but especially to blows operating by counter-shock. Both clavicles have been broken by the same force pressing together both shoulders, as where the body has been crushed between a wall and a heavy carriage. This is the most common of all fractures in infancy. When a child has fallen from a bed or chair, and complains of pain on moving the superior extremity, especially if the humerus be pressed upwards by a force applied to the elbow, there is strong reason to apprehend a fracture of the clavicle. This is most often accompanied with a perceptible crepitus, on examination, and not always by motion between the fragments. It is quite common, when the most accurate examination has failed to detect crepitus or motion, to find a tumor of callus, of the usual size, on the eighth or tenth day; and I have known a surgeon's reputation materially damaged, by too strong a negative diagnosis in such cases. The only safe rule, in doubtful cases, is to proceed on an affirmative supposition, and apply a simple retentive

apparatus. The only treatment necessary, in fracture of the clavicle, is: 1st. To support the weight of the superior extremity, by a sling below the elbow. 2d. To carry off the superior end of the humerus, by a fulcrum of suitable material, placed in the axilla. 3d. To prevent the shoulder from falling inward, by turns of a bandage carried from the injured to the sound shoulder. A simple and effective method, in those cases where there is little disposition in the shoulder to fall inward, is to apply a graduated cushion between the humerus and trunk, confine the humerus with several turns of a roller round the body, and to suspend the hand and fore-arm in a handkerchief tied round the neck. In adults, where the fracture is in its usual place, the middle of the bone, the diagnosis is easy, by running the fingers along the superficial line of the bone. But when the fracture takes place at the scapular extremity, near the coracoid process, the diagnosis is difficult, and sometimes impossible to be determined by examination; and only to be inferred from the pain, inability to carry the hand to the head, and the nature of the force applied in producing the fracture.

VIII. *Humerus.*—This bone is exposed to fracture principally from the effects of direct force; a counter-shock rather tends to dislocation. Fracture of the middle portion is easily detected; but at its extremities much doubt often accompanies the diagnosis. At the superior extremity, fracture above the insertion of the pectoralis major, or, as it is surgically denominated, fracture of the neck of the humerus, may be easily

confounded with dislocation. There is the same flattening of the shoulder, depression below the acromion, and tumor in the axilla. But in fracture there is greater freedom of motion, the tumor in the axilla is irregular, sometimes angular, instead of being round, and especially, as has been particularly noticed by Dupuytren, the kind of force producing the accident will be found to vary. A direct blow on the deltoid muscle, or a fall with the hands confined by the dress, will cause a fracture of the neck of the bone; while a dislocation is more apt to be occasioned by receiving the force of the blow upon the hand, put out to break the fall. A careful attention should therefore be paid to the marks upon the dress, and to the contusion of the soft parts, with a view of determining the direction of the force applied. Fracture of the inferior extremity of the humerus is perplexing, from the complicated nature of the elbow joint, and the great degree of tumefaction which usually accompanies the accident. The fracture of this part is mostly occasioned by direct force, and consequently is frequently comminuted. Sometimes one condyle is broken off. Sometimes the shaft is broken near the condyles, which are separated by a longitudinal fracture. If the articulating capsule is involved in it, the pain, on motion in the joint, is very severe; and the symptoms which take place subsequently are of a grave character, and require strict rest and local depletion. The deposit of callus in the joint is apt to interfere with its motions. In this case, after perfect union of the separated parts has been accomplished, the practice recommended by

Hildanus, of swinging a weight in the hand, has been found very efficacious in promoting the absorption of superfluous callus. An angular splint is proper for these cases; so that if anchylosis should in any event take place, the arm may not be left in an extended posture, which would be far more inconvenient than a state of flexion.

IX. *Radius and Ulna.*—An almost endless variety takes place in the fractures of the fore-arm. One or both bones may be broken, and in one or more places. The middle and lower portion is most subject to the accident, the thick muscles of the upper portion supporting and defending the bones. By a direct force, such as the falling of heavy bodies, the comminuted fracture is produced; while, by a counter-shock, such as falling upon the hands, the simple fractures are, for the most part, produced. There is no difficulty in detecting fracture of the middle of the fore-arm. The altered form, crepitation between the fragments, and the great pain produced by attempting pronation and supination, reveal the nature of the accident. But fracture near the humerus is sometimes obscurely felt, by reason of the thick covering of muscles, and the absence of distortion and crepitation; while fracture near the carpus may be mistaken for luxation. The deformity produced by the latter accident yields readily to extension, and rotation during extension generally detects the former, by producing crepitus.

Fractures of the radius are more common than those of the ulna. When an individual falls forward upon his hands, the radius receives the opposing

forces transmitted by the humerus and the bones of the carpus, and gives way usually in its middle third. The diagnosis is made by feeling for the head of the radius, and gently rotating the hand, by which the solution of continuity will be detected by the motion not being communicated to the superior fragment, or by a crepitation between the fragments. Fracture of the ulna is usually obvious by the prominence of the inferior extremity of the superior fragment, the other being drawn in towards the radius by the quadratus muscle. Whether one or both bones be broken, the tendency of the fragments, owing to their connection by the inter-osseous ligament, and the action of the quadratus and other pronator muscles, is to approach each other and diminish the breadth of the fore-arm. The only means we have of counteracting this tendency is by moderate pressure, by which the muscles are forced between the bones, and tend to separate them. The coaptation of the fragments in fractures of the fore-arm is best effected by committing the extension to attendants, while the operator presses his fingers with moderate force against the inside of the fore-arm, carrying the muscles, as much as practicable, between the radius and ulna. Graduated compresses, soaked in water, are then to be applied, and confined with a roller, over which are to be placed two splints; the inner one reaching from the bends of the fingers to the bend of the elbow, and the outer one extending beyond the external condyle of the humerus. Notwithstanding the greatest care in the adjustment and treatment of fractures of the fore-arm,

many instances of deformity will occur. Our pathological museums present an immense variety of irregular consolidations of the radius and ulna, which must have seriously interfered, during life, with their appropriate functions. From thirty to forty days usually suffices for the union of the bones of the fore-arm; but when the articulations are involved in the inflammation attending the injury, a rigidity and painful increase of sensibility remain for a long time, and require much care and attention. The rigidity of the tendons is to be overcome by the early trial of gentle flexion and extension; and the pain and morbid sensibility by topical bleeding, and especially by warm fomentations and showering of tepid water. The fracture of the olecranon apophysis exhibits some peculiar features. The superior fragment is drawn upwards by the powerful action of the triceps brachialis, leaving a depression between the fragments, by which the nature of the injury may be detected, unless when extensive contusion and injury of soft parts obscures the diagnosis. The accident is produced most commonly by a fall on the point of the elbow, and is accompanied by a sudden and very perceptible snap, followed by pain in the part, and inability to bend the elbow. The reduction is easily effected by the most obvious means. The superior fragment is to be pushed down, and retained as near its place as possible, by compresses and a bandage which should begin at the hand. An angular splint, allowing the fore-arm to be slightly flexed, is to be secured at the inside of the limb. In the great majority of instances,

the union is of a fibrous character; but this does not seriously impair the strength or mobility of the part. The other fractures of the superior extremity do not call for particular description or remark.

X. *Femur.*—The thigh bone—the strongest, most dense, and most completely defended by muscular substance of all the long bones—is, from its length, its position, and especially from its curvature, the most frequently fractured. The fracture is most commonly oblique, and the inferior fragment is drawn upward by the strong muscles attached to it, and to the bones of the pelvis, and rides over the superior, which retains its place. The weight of the leg and foot, and the position in which the foot is attached to the leg, tend to drag the inferior fragments to an angle with the superior, and to rotate it upon its axis. Hence arises a deformity at the place of fracture, which renders the diagnosis of fracture in the shaft of the femur comparatively easy. The bone is usually shortened, bent, and the foot and lower fragments rotated inward or outward. The usual symptoms of pain, crepitus and immobility, may also be commonly observed. The femur differs from every other long bone in the peculiar nature of its superior articulating surface. The transverse direction, and smaller diameter of its neck, render this part peculiarly exposed to the effect of opposing forces compressing together the two extremities of the bone; and the immense power of the glutei, and other muscles inserted into the great trochanter and its neighborhood, separate the fragments, so as to create a formidable obstacle to their

reunion. The thigh bone has been, almost literally, a *bone* of contention for surgeons, and has caused the shedding of more ink, in support of the different views of pathology and treatment, entertained by different eminent surgeons, than any other subject since the discovery of the circulation of the blood. The cautious practitioner, however, will be eclectic in his practice, and adapt his treatment to the nature of each particular case, and not exclusively confine himself to the rules of one master. It is obvious that the private practitioner must choose his mode of practice not only with reference to the kind of fracture, and its place, but also take into view the character and circumstances of his patient, the degree of skill and watchfulness of his attendants, and likewise his own opportunities of frequent inspection.

Some of the arrangements for the treatment of fractured femur are well adapted and useful, but apt to be disturbed by slight causes, and had better be given up for inferior substitutes less easily deranged. There are three modes of treating fracture of the shaft of the femur, each of which has advocates of high authority. The most ancient is that on which Dessault engrafted his improvements. Its principle consists in keeping the limb extended in a straight line. The French surgeons contend for this mode, and it is much used in this country. It is adopted in most cases treated in the Massachusetts General Hospital, where its success will bear a favorable comparison with any other method. The English surgeons, following Pott, till within a few years, almost exclu-

sively adopted the method strenuously recommended by that distinguished surgeon, of laying the limb on the external surface, with the knee flexed. The third method is that recommended by Sir Astley Cooper, and by many modern English surgeons, of laying the patient on his back, and passing the limb over a double inclined plane, the angle of which is placed beneath the knee joint. I am certain there is no one of my audience, who has seen much of private practice, who has not had occasion to adopt all three of these methods. When the fracture is in the upper third of the limb, it is very obvious that the lower fragment constitutes a longer lever, by which the power of displacement is very much augmented in the lower fragment, and therefore the limb, resting on its side, without confinement, is less secure, and more exposed to accident. In this case, the advantages of the straight position are most manifest, as it enables the surgeon not only to compress the muscles, and confine their action, but to keep up a constant application of extending forces, by which the action of these muscles is effectually opposed. Some of these advantages may be had, although not in the same degree, by the use of the double inclined plane. On the other hand, when the fracture is near the knee joint, the perfect relaxation of the muscles inserted into the tibia and patella, and which tend to draw up the lower fragment, is a point of the utmost consequence, and is best secured by laying the limb on its side, in a flexed position. In all these methods, the limb is first enveloped by a bandage of strips, or a

roller extending from the toes to the hips. In the next place, four splints, protected by simple compresses, are to be placed round the place of fracture, and confined with tapes. The immovable apparatus is as applicable to this as to any other fracture, and, in cases of simple fracture without considerable tumefaction, works admirably. For the extended position of the limb, the apparatus best adapted to the management of the case is a modification of Dessault's, in use at the Massachusetts General Hospital. It consists of two splints of hard wood, reaching from below the foot to the groin and the crest of the ilium, and confined at the bottom by a cross-bar, through which traverses a screw; which, by means of a laced sock, or handkerchief applied to the foot, creates the extending force to draw down the limb. A broad belt round the hips, having a pocket to receive the superior extremity of the outer splints, and a strap passing between the thighs, confines the upper part of the outer splint. Great attention is necessary to prevent the injury which may occur from the pressure of the laced sock or handkerchief. In fractures of the upper third of the femur, where the double inclined plane is preferred, the most convenient apparatus by far is Mr. Amesbury's fracture-bed. This effectually answers every indication.

XI. *Cervix Femoris.*—The fracture of the cervix femoris presents considerations of a distinct nature. Deeply imbedded in muscles, the fracture of the part does not exhibit those changes of outline which mark the solution of continuity in the shaft of the bone.

Shortening of the limb—the most apparent physical sign of the accident—is not always present; and if present, frequently does not take place till after several hours, and perhaps days, have elapsed.

Causes.—The efficient cause is a force applied to the inferior extremity of the femur, or to the great trochanter. The operation of direct force, as in the case of a projectile, is a possible, but an extremely rare, occurrence. The largest number of cases occur from falls upon the hip. Dessault states that twenty-four out of thirty cases are caused by this accident. An apparently slight force is sufficient to cause this fracture. Among the most common accidents causing it, is slipping from the side-walk into the street, and tripping on a fold of carpet within doors. The predisponent causes are the alterations of the bone by age, which are: 1st. Change of the obliquity of the neck of the femur, by which the force applied, in falling upon the foot and knee, operates more transversely. 2d. An increased deposit of the earthy material of the osseous tissue. 3d. In atrophy of bones, which is by far the most important of these changes. This shows itself by diminution in weight and density, without corresponding diminution of volume. The cavity of the long bones increases in diameter; their walls grow thinner, and the medullary substance abounds. The operation of these changes, in affecting the proportion of fractures of the cervix to those of other parts of the femur, is illustrated by the remark of Cruveilhier, that in four years' service in that great asylum of the aged poor,—the Salpetriere, at Paris,

—where a month was never known to pass, without the occurrence of fracture of the cervix femoris, he had never witnessed the occurrence of any other kind of fracture.* At least two-thirds of the cases of fracture of the neck of the femur occur to females; and this, no doubt, from their being exposed, in a much greater degree than males, to the predisponent causes. Aged females are more sedentary; and hence their greater proneness to atrophy in the organs of locomotion. The form of the pelvis, likewise, in females, creates a more decided prominence of the great trochanter.

Symptoms.—When a person of fifty years and upward has received a fall upon the hip, or a shock from stepping down suddenly and unexpectedly from a high step, and complains of having felt, at the moment, a sharp pain in the hip-joint, accompanied with a snap, and is unable to raise the limb without great pain, there is great reason to look for fracture of the cervix femoris. If we look for farther signs, we find shortening of the limb, but not always at the time of the accident; the great trochanter carried outward, and brought nearer to the crista ilii, the knee slightly flexed, and the foot everted. In sixty cases in the observation of Cloquet, the toe was turned outward; and Boyer's immense experience never met with a case turned inward. If the patient is made to stand up, the toes rest upon the ground, while the heel is raised and brought against the hollow of the other foot. On placing the hand upon the

* Livraison, XXIII.

great trochanter, and rotating the injured limb, the trochanter is found to revolve upon the axis of the femur, and not upon a radius formed by the neck of the bone. This diagnostic sign is of great value, and especially observable in those cases where the fracture is at the base of the neck, near the great trochanter. The part of the neck most frequently the subject of fracture, is just at the junction of the head and neck of the bone, where the diameter of the bone, and the compactness of its tissue, are least. In the fracture of this part, crepitus is a less certain sign than in other fractures. When the fracture is very near the head of the bone, the small portion of bone remaining in the acetabulum follows the motions of the major part, and the broken surfaces are not opposed with sufficient force to produce crepitus. So, when the fragments are wedged and impacted together by a blow on the trochanter, motion is communicated to the head of the bone, without crepitus. When, therefore, on drawing down the injured limb to the same length as the other, and gently rotating it, and then performing the same evolution with the limb flexed on the trunk, a crepitus is not perceived, no farther attempts to produce this sensation should be persisted in; especially since such attempts, if rudely continued, may cause the separation of those unbroken fibres of the articulating envelope, or fibrous periosteum of the neck of the femur, which constitute the bands on which the strength of the false articulation greatly depends, and the rupture of which would infallibly greatly increase the degree of eventual lameness. In

the greater number of those instances which have fallen under my observation, no crepitus was discovered by any attempts which I thought it judicious to make. A correct diagnosis, important though it be, is not a paramount consideration; and no very great injury would result from the treatment of all doubtful cases of contusion and injury of the hip, on the supposition of a fractured cervix femoris, judging merely from the presumptive signs. Sir Astley Cooper has been most successful in calling the attention of the profession to the important distinction between the fractures of the cervix femoris which are within, and those which are without the capsular ligament of the joint. The latter, like all other fractures and wounds attended with separation of parts, goes through with a process of restoration and union, in which the surrounding parts assist, and, of course, are not unlike other fractures in their termination; while the fractures within the articulating capsule very seldom unite by ossification or definitive callus, but by cicatrization or fibrous ligament. Sir Astley Cooper, although he does not deny the possibility of this ossific union, affirms in his work that he has never seen an indubitable case. He has been misrepresented as saying that ossific union is impossible in intra-capsular fracture. He has given rise to this misrepresentation by the strength of his language, which his later experience, no doubt, would lead him to modify. I have seen, in his possession, an indubitable specimen of ossific union, and have heard him admit that such cases had occurred to others, although, at the time of

publishing his great work on fractures and dislocations, he had never met with such an instance. My friend, Dr. Mussey, has, with great pains, procured at least two specimens from cases occurring within his own practice, where the evidence of ossific union is indubitable. The question so long agitated may, therefore, be considered as settled in the affirmative, that there is nothing in the anatomical structure or peculiar organization of the parts concerned in this fracture, to prohibit ossific union; but that, under favorable circumstances, it will take place. The reasons why this ossific union so seldom takes place, are, according to Sir Astley,—1st. The non-apposition of the fragments. 2d. The absence of pressure to approximate the fragments, and excite their action. There are no muscular fibres to produce this pressure; and the accumulation of synovia prevents it by interposing between the fragments. To be sure, this effused synovial fluid is absorbed, but not until the inflammatory action, which, in other fractures, produces the provisionary callus, has ceased; and, in its stead, there is formed, from the articular synovial membrane itself, a ligamentous substance, which is to become the bond of union between the divided parts. 3d. The absence of all attempt at ossification on the part of that portion of bone which remains in the acetabulum, and whose vitality is mainly supported by the low vascularity of the round ligament. The ingenious Cruveilhier,* in his magnificent work on the pathology of the human system, combats this explanation, although he goes

* Livraison, XXIII.

even farther than Sir Astley in denying that intra-capsular fractures, when the periosteum and duplicature of the synovial membrane have been divided, can ever unite by ossific deposit. He replies to the first reason, that, in many fractures, the fragments are farther removed from each other, and yet unite by a bridge of bone, which sometimes is connected with parts that are not involved in the solution of continuity; as when a long bone overlaps so far as to have every portion of the fractured fragments pass each other. 2d. As to the second reason, supposing it proved (which is not granted), that pressure is necessary to ossific consolidation, it must, of necessity, exist, by the structure of the capsular ligament of the hip joint, which confines the fragments by its resistance, and prevents any considerable accumulation of fluid, beyond the ordinary quantity of synovia. 3d. The third reason is not satisfactory to this author, inasmuch as his theory of the formation of callus does not attribute an active agency to the fragments of bone themselves, but mainly to the muscles which surround and are attached to them. He supposes that he has proved, by experiment on animals, that the process of union in broken bone is carried on, not by the ends of the broken bone, but by the periosteum and muscles which environ them. At first, these tissues, losing their linear and lamellated structure, assume an appearance like the effusion of albuminous fluid in cellular membrane; then it acquires the consistence of cartilage, and its boundary is defined, separating it from the unchanged tissues; lastly, this

cartilage is penetrated with osseous deposit. In his opinion, it is doubtful if the effused fluids have any office in the formation of callus; and he considers the definitive callus not to be furnished (as Dupuytren, whose theory is a modification of Duhamel's, supposes) by the ends of the broken bones, but to be only the provisional callus, converted from a spongy tissue to a compact one, by interstitial bony deposit. Such being his theory of the restorative process, he accounts for the non-union of intra-capsular fracture of the cervix femoris by the absence of the conditions necessary for the formation of callus, especially by the absence of muscular fibre, attached to the fragments. It is of considerable importance, in a practical point of view, to determine whether the fracture exist within or without the capsular ligament. In the former case, the shortening of the limb is less than in the latter. This is owing to the confinement caused by the capsular ligament, which will only allow of a limited retraction. When the shortening, therefore, is more than an inch, the presumption is, that the fracture is wholly or in part extra-capsular.

Treatment.—The treatment of this accident does not, in all cases, present the same therapeutic indications. In very aged persons, the consolidation of the fracture is not the most important indication. Many of these cases prove fatal, in consequence of the injury which the constitution receives from the accident, and the subsequent confinement; and the principal indication is to guard against these disastrous effects. When a physician is called to manage this accident

in an aged person, he should ponder well the consequences of a long confinement in a recumbent posture. The arterial circulation, in many aged persons, is exceedingly laborious; and the disposition to venous congestion is great. From the derangement of the circulation, occasioned by these causes, a sudden change from the recumbent to the erect posture has thrown such a load upon the central organ of circulation as to master its powers, and cause instant death. In such cases, likewise, the skin does not well bear pressure; and tedious and sometimes dangerous ulcerations, over the sacrum, will ensue. In all cases in which confinement to the bed becomes necessary for an aged person, in consequence of injury, it is a good practice to protect the skin of those parts on which the weight of the body rests, by a covering of mild adhesive plaster, such as the Emplastrum Plumbi. In many instances, therefore, a practitioner, carefully weighing all the circumstances, would decide that the case might be left entirely to the operations of nature, without attempting to call in the aid of art. In such cases, the advice of Sir Astley Cooper, for the treatment of intra-capsular fracture, may safely be followed. He avoids confinement and continued extension, as injurious to the general health, and hopeless, as regards union. The patient is to be made as comfortable, as to position, as he can be, by pillows and compresses, and the fracture left to its fate. After a fortnight or three weeks, the patient is to be raised into a chair; and, as soon as able, to begin to use crutches. The following instance,

occurring in my practice, is such an one as is, no doubt, familiar to the observation of most of my audience. A woman, over 70 years of age, who had been accustomed to hardship all her life, fell down stairs, and, striking on the hip, fractured the neck of the femur. She laid upon the bed she had been accustomed to, for four weeks, keeping the part wetted with rum. At the end of this time, she was able to sit up; in six weeks to move with crutches, and in three months to walk without them, with only a slight limp, and the limb shortened one inch and a half. During all this period, her health was uninjured. Every one must have observed how subject aged people are to pains of the large joints. This affection is greatly increased during confinement for the cure of fracture, and constitutes an important argument against the retentive arrangements, whose object is to procure ossific union. The authority of Dupuytren goes strongly for attempting the cure by a longer confinement than is usually practised. Mr. Amesbury, likewise, who places great confidence in retentive apparatus, contends that no case of fracture of the cervix femoris is to be abandoned to non-union until after the employment, for a reasonable time, of the means profitable to effect union. M. Dupuytren believes the principal peculiarity of this form of fracture to consist in the slowness of union, from the imperfect circulation, and the direction of the fracture being nearer to a parallel with the axis of the body, than those of the shaft of the bone, whereby the weight of the body in the erect position easily

separates the fragments. But the long horizontal confinement which this most distinguished surgeon recommends,—from four to six months in duration,—is almost entirely incompatible with the debility of advanced age; and the humane surgeon is called upon, in such cases, to give up the pride of art, and surrender to the patient, tottering upon life's verge, his other comforts, while he abandons the prospect of restoring his perfect locomotive powers. It is, however, a sound rule of practice, to keep the limb quiet, and the fragments in as complete apposition as can be done, without the application of means decidedly injurious to health; for, however the union may be effected, whether by bone or fibrous tissue, the lameness after cure will be less, the nearer the fragments approximate.

When it is considered prudent to aim at ossific union, the indications are, to oppose to the muscles whose contraction draws up and everts the limb,—as the glutei, adductors, pectineus and psoas,—a counteracting force sufficient to overcome their power, and to continue this force during a period long enough for the consolidation of the bone. The variety of the means adapted to fulfil these indications proclaims their insufficiency. The most effectual are the modified splints of Dessault, already alluded to as in use at the Massachusetts General Hospital; and the fracture-bed of Mr. Amesbury. The former apparatus is well adapted for extra-capsular fractures; and, if judiciously managed (for it requires constant watchfulness), can be borne for the period necessary for

consolidation. The latter supports the whole body in an admirable manner, and avoids the danger arising from long recumbency, by enabling the occupant to obtain frequent changes of posture from less to more erect, and the reverse, without discomposing the injured parts. One of the greatest merits of this apparatus is, that the weight of the body and of the limb antagonize each other; and when the foot is confined at the bottom of the bed, this degree of extension will generally be sufficient to overcome the resistance of the muscles. Whatever apparatus is applied, a firm, broad bandage round the pelvis, pressing the fragments moderately together, should never be omitted. Various other plans are described in the writings of surgeons of all countries; but most private practitioners with us will, I think, coincide with me in the judgment I have given.

Fractures of the great trochanter and of the condyles need not detain us, as the general principles laid down for the diagnosis and treatment of fractures in general, sufficiently indicate their management.

XII. *Patella.*—The small size and great mobility of the knee-pan save it from frequent fracture, to the causes of which it is abundantly exposed. When this fracture takes place, it is owing either to direct force, as by falls and blows, or to the powerful contraction of the extensor muscles of the thigh, as in the effort to recover from a fall, in kicking a foot-ball, &c. It is easy, for the most part, to detect this fracture, by the separation of the fragments, which uniformly takes place when the fracture is transverse; longitudinal fracture of this bone being exceedingly rare. At the

moment of the fracture, a sharp pain is felt in the front of the knee, and the patient immediately falls, or, if fallen, is unable to rise on the injured limb. He is unable to walk, in consequence of inability to antagonize the flexor muscles of the leg. These symptoms, however, are common to this, and another accident of much more rare occurrence, viz., rupture of the tendon of the patella, or of the rectus femoris. The displacement of fragments is, however, sufficiently distinctive.

Treatment.—In the treatment of fractured patella, the fragments are usually easily brought in contact by raising the heel, so as to extend the limb, and flexing the trunk of the body on the lower extremities. Whatever be the mode of treatment, the union is, for the most part, of a fibrous character; simply because the difficulty of retaining the fragments in sufficiently close apposition for osseous union is so great. If the length of this fibrous union is not too great, the injury is perfectly recovered from, and no observable limp in gait ensues. A great variety of machinery has been put in use, to keep together the fragments of the broken patella; and, as usually is the case, the simplest is the best. The superior fragment, being pressed down, should be retained there by the pressure of a quilted strap passed above it, and secured to a long splint on the posterior part of the limb. If the splint is hollowed, and well padded, and the superior strap fastened to knobs in its side, and crossed by a similar one carried below the lower fragment, and secured to knobs above the former, perhaps no better apparatus can be named. Sir Astley Cooper's is very simple. It consists only of a padded strap secured round the

thigh above the fracture, and confined down by a strap like a stirrup passing below the foot. About six weeks is necessary for the consolidation of this fracture.

XIII. *Tibia and Fibula.*—Perhaps there is no form of fracture to which the surgeon's attention is so frequently called, as to fracture of the leg. Of 367 fractures on the records of the Massachusetts General Hospital, 153 are fractures of the leg. Most of the occupations of laboring men expose them to this accident. Both bones are more frequently fractured than either of them singly; and the most common seat of the fracture is at the superior part of the inferior third of the limb. The tibia is more frequently the subject of fracture than the fibula. At first sight, this may seem unlike what was to be expected. But it is to be observed that the tibia bears the whole weight of the body, and that the articulating surfaces of the fibula are on its side, and not upon its extremities. When the tibia has given way, the weight of the body falling on the fibula would almost inevitably break that bone. I had occasion to remove a leg for compound fracture under the following circumstances: A man, 50 years of age, in good health, while at work in the woods with a very sharp axe, struck at a small twig, which afforded scarcely any resistance to the blow; and the handle of his axe, encountering the limb of a tree, gave a direction to the instrument which brought it obliquely against the tibia, which it divided with a clean cut. Perceiving he was wounded, the man ran a few steps, when the fibula gave way, the lower extremity penetrated through the skin, and he fell. When, however, the fibula retains its continuity,

it furnishes the most perfect splint to retain the broken fragments of the tibia in their proper places. When the fibula alone is fractured near the ankle-joint, the tibia does not so well perform the office of a splint; for the outer defence of the articulation is taken away, and the joint is easily dislocated outward, carrying with the foot the lower fragment of the fibula. When both bones are broken near the ankle-joint, the foot and lower fragments are drawn outward and backward, in a way that somewhat resembles the dislocation of the tibia from the astragalus, with fracture of the fibula. It is to be remarked, that there are no insertions of muscles into the inferior extremities of the bones of the leg, the fibres of which, as in other fractures, might serve to retain the divided portions in partial contact. The foot and lower fragments are displaced by the gastrocnemii and peroneal muscles; and the broken extremity of the tibia projects in a manner not greatly unlike its appearance when dislocated. When fracture exists, compounded with luxation and laceration of the integuments, the accident is one of the gravest that can happen. There is, generally, but little perplexity in the diagnosis of fractures of both bones of the leg. There is sudden pain, inability to walk, deformity in the outline of the limb, mobility of the fragments, and crepitus. It happens not unfrequently that the two bones are not fractured in the same horizontal line with each other. When this is the case, for the most part, the fracture of the fibula is higher up than that of the tibia, and cannot be recognized by the touch. It may always, however, be inferred, when the mobility

of the lower fragment is very great, and the deformity in the outline of the tibia very marked; symptoms that are not remarked when the tibia alone is fractured.

Treatment.—In the greatest number of instances, the treatment of fracture of the leg requires only dressing of great simplicity. It is very rarely the case that permanent counter-extension is necessary to retain the fragments in place; and when it is, the simplified apparatus of Dessault is all that is required. If the patient is laid on his back, and the limb well supported by pillows, no harm is likely to follow the delay of two or three days in applying the usual dressings; so that no excuse can be allowed for hurry, and imperfect apparatus. In many instances, the immovable apparatus is well adapted to fulfil the indications of cure. To apply this, two moderately thick compresses, soaked in the solution of starch or dextrine, should be applied to each side of the limb, barely touching each other on the posterior and inferior part, but leaving a small open space in front. These are to be secured by a long roller, soaked in the same liquid, enveloping the whole limb, from the toes to the knee. Then two pasteboard splints, narrower at bottom than at top, are to be applied, after having been made perfectly soft by being soaked in hot water. Over these are to be passed many turns of a starched roller. The whole is to be kept steady by the support of pillows, or of thin board splints, rolled in a splint-cloth. The shrinking of the limb, from the diminished swelling, may require a reapplication of the dressings at the end of about ten days; and it is better to reapply it than to attempt to

fill the vacuities by stuffing with cloth or cotton. Where the immovable apparatus is not applied, the following method has been found satisfactory in every case of simple fracture of the leg which has come under my observation. The patient should first be placed upon a firm bed,—either a mattrass of curled hair, or a feather bed supported on a straw pallet, with a flooring of boards laid on the bedstead. A pillow should be provided for the limb. This is best, likewise, to be made of hair. A softer one may be laid beneath the thigh and ham. Over this pillow are to be laid, first, three tapes, at equal distances; then, two splints of thin board, about four inches wide, and reaching above the patella and below the os calcis. These should be rolled in a splint-cloth, of a suitable width entirely to conceal them, and brought so near together that, when lifted up on their edges, they constitute a fracture-box, just capable of holding the limb, and its interior dressing. Next in order, upon these splints, are to be laid three more tapes; then, two splints of smaller size, reaching from the bottom of the foot to a sufficient height to pass the fracture by several inches. These splints may be scored and lined with soft leather, in the usual fashion. Above these inner splints is to be placed a bandage of strips, upon which are laid three compresses of old linen or cotton cloth, of sufficient thickness, and suitably graduated to fill up the inequalities of the limb, and completely protect the outer and inner ankle from the pressure of the splints, and the os calcis from that of the weight of the limb. The compresses and bandage of strips should be wetted in cold water, and laid

perfectly smooth. The patient being undressed, and laid upon his back on the bed, the limb may be committed to two assistants, while the principal takes charge of the pillow of dressings. The assistants, grasping the limb by the knee and the instep, are to make steady and gradual extension, till the irregularities in the outline of the tibia disappear, and the direction of the foot becomes natural. If the force is skilfully applied, a very strong extension may be made without considerable pain. The pillow of dressings is now to be placed beneath the limb, which is to be lowered down to it, the extension being still continued till the dressings are applied. The compresses, the bandages of strips, and the inner splints are to be adjusted with moderate firmness; and over all, the outer splints and splint-cloth, constituting the most complete and convenient fracture-box. A foot-board is to be adjusted to the bed; a pillow or cushion is to be placed between that and the bottom of the foot, which is to be kept from turning inward or outward by the support of pillows or cushions on the sides. Over all is to be placed a cradle, to bear the weight of the bed-clothes. These dressings may be continued for four weeks, occasionally drawing the tapes tighter, or loosening them, as need may be. The dressings may be opened, and the anterior part of the limb inspected, without the slightest fear of derangement of the fractured portions. In case of compound fracture, likewise, this apparatus gives access to the wound, and portions of it, as the strips and compresses may be changed without disturbing the remainder. When the wound is on the posterior part of the leg,—

which is rare, unless produced by direct force,—the limb may be flexed and laid on the side. For a vast majority of fractures of the leg, the above-described apparatus, methodically applied, will fulfil every indication. When the fracture is very oblique, with a tendency to shortening, the same methods of counter-extension are applicable as have been recommended for fractures of the femur. It has been advised to apply a sort of counter-extending splint (Hutchinson's), the superior extremities of which are confined by a circular strap just below the knee. As far as my experience in their use extends, I have found them create far greater pain and irritation than when the point of support is made at the groin and pelvis. There is one description of cases in which Mr. Amesbury's ingenious apparatus becomes very valuable. By his contrivance,—for a description of which I refer to his book on fractures and dislocations,—a patient can take the air, either with or without a carriage, and thereby the state of the general health be preserved or restored,—the low state of which has sometimes proved the obstacle to ossific union.

Fractures of the lower third of the fibula require a peculiar treatment. The mismanagement of this fracture is a fertile source of deformity. The office of the lower extremity of the fibula is to constitute the outer edge of the mortice of the ankle joint. When this is broken, there is a great tendency in the action of the muscles to pull the foot outward and backward; and to obviate this tendency is the leading indication of the treatment. The simple contrivance of Dupuy-

tren completely fulfils this indication, and merits more extensive trial than I have reason to believe it has met with from the practitioners of this country. It consists simply of one splint, extending from the top of the tibia four inches below the sole of the foot. A cushion of bran, folded double at the inferior part, where it touches the inner ankle, so as to take a conical shape, the base of which is directed downwards, is laid between the splint and the limb. The splint is confined by many turns of a bandage, and the foot turned inward, so that the sole looks towards the inner face of the splint. By the application of this force, the upper portion of the lower fragment is carried outward, while the foot is drawn inward, carrying with it, confined by the external lateral ligament, the inferior extremity of the fibula. The time of consolidation is from four to six weeks; but the joint may be considered in some danger of permanent lameness for a longer time, and therefore the patient should be required to use splints, and refrain from bearing the weight of the body upon the limb for several weeks longer. There are no points of special interest in the fractures which befall the bones of the foot (which are usually fractured by violent application of direct force), which need particular discussion.

I have thus completed a practical sketch of the subject of fracture, the difficulty of compressing which into a moderate space I did not at first appreciate; and I shall much regret, if, in laboring to be brief, I have become obscure.

NOTES.

NOTE A.

The following are the names of those Fellows of the Society who have departed this life during the past year:

NAMES.	RESIDENCE.	DATE.	ÆT.
NATHANIEL BEMIS,	Watertown,	July 23, 1839,	56
THADDEUS BROWN,	Billerica,	Oct. "	37
†JACOB GATES,	Boston,	Oct. "	65
LEMUEL W. BELDEN,	Springfield,	Oct. 26, "	38
†ABIEL HEYWOOD,	Concord,	Oct. 29, "	
†GAMALIEL BRADFORD,	Boston,	Oct. 21, "	44
MATTHEW B. BAKER,	Springfield,	Sept. "	30*
CHARLES CUTLER,	Grafton,	Dec. "	25
ELISHA MATHER,	Northampton,	April 24, 1840,	48

The Hampshire Gazette contained the following obituary notice of Dr. Mather:

"In noticing the death of this good man and physician, it is not our object in this obituary to analyze particularly his character, or describe minutely the elements of which it is composed; but generally to bear testimony to his high standing in his profession, and the excellency of his character. Dr. Mather was, undoubtedly, more self-taught than most of his professional brethren. He was indebted to his talents, his industry and his application,

* Supposed.

for the rank which he attained. In all the various branches of his profession, he was entitled to entire confidence. With the structure and functions of the different parts of the human system, he was most intimately acquainted, and seldom surpassed in accuracy of anatomical knowledge. His practice was invariably founded upon physiological and pathological principles. He always thoroughly investigated the cause of disease, and applied his remedy accordingly; and though the public, as a mass, may not have awarded him that reputation, as a physician, to which he is justly entitled, those most competent to judge of his qualifications (the medical profession) have duly appreciated his great worth. Else, why is it that some of the most intelligent and skilful physicians have been so frequently accustomed to consult him on the most difficult and obscure cases? Why is it that the Massachusetts Medical Society have so long and so often honored him with many of their most important offices, and recently elected him on a very important committee, to revise its laws and regulations? Why is it that he was so much esteemed and beloved by those who best knew him, and reposed confidence in him as a family physician? The truth is, Dr. Mather was a practitioner of no ordinary character, and his loss will be long and deeply felt, especially by those of his profession who have been accustomed to look up to him for counsel in their doubts and in their perplexities. He possessed a clear and discriminating mind, sound judgment, quick perceptions, retentive memory, and prompt and decided action. He was affectionate and most generous in his feelings; honorable and most open himself, he seldom distrusted others. To kindness he was remarkably susceptible, and seldom or never forgot a favor.

"In his deportment he was neither forbidding nor imposing, but was affable and accessible to all; so that

his younger brethren could always approach him without being apprehensive that they should be overpowered by his feeling of superiority.

"In his domestic relations, he was greatly endeared. His conduct in his family was marked by the greatest purity and tenderness; and he here experienced his greatest happiness. As a Christian, he was exemplary, and no one doubts that he possessed the leading characteristics of a Christian character. 'Wo unto us, then, not him, for he sleeps in rest.'"

The following notice of Dr. Belden, from a friend well able to appreciate the excellences of his character, contains a just tribute to his worth:

"The loss which a community sustains, in the death of an intelligent and beloved physician, is severe, and often irreparable; not so much that one of equal skill cannot be substituted, as that the confidence reposed in the *one* cannot immediately be transferred to the *other*. Such a physician is not only the medical adviser, but often, also, the friend and confidant of the sick; he sympathizes with them in their sufferings, enters into all their feelings, and is a comforter in all their trials. His presence and encouragement are often as beneficial as the medicine which he prescribes. When death removes him, they feel that their security is gone; that life is less valuable, because more uncertain, and because one of the sources of enjoyment is removed; and that a severe trial awaits them in selecting another in whose knowledge and judgment they can place the same confidence, and on whose integrity and friendship they can as safely rely.

"These reflections have been awakened by the widespread sorrow and lamentation occasioned by the death of that excellent man and estimable physician, Dr. Lemuel

W. Belden, of Springfield, Mass., who recently fell a victim to the malignant typhus fever, which has prevailed somewhat extensively in that vicinity.

"Dr. Belden was a native of Wethersfield, Conn., son of Dr. Joshua Belden, a respectable physician and most valuable man, who died of the epidemic spotted fever, in June, 1808, in the midst of life and in the full vigor of usefulness. Lemuel Whittlesey Belden, M. D., the subject of this memoir, was born September, 1801, and was left an orphan, with three younger brothers, in the care of a discreet and sensible mother, at the early age of seven years. Every care was given to his early education which a mother could bestow, and faithful and well qualified teachers could render; and at the age of sixteen, he entered the Freshman class of Yale College, September, 1817.

"During his minority, before and after he entered college, young Belden was a modest, reserved youth, fond of his books, which had greater attractions for him at this early age than the sports and amusements of his associates. The traits of character most prominent in his childhood, were *love of truth*, *sobriety*, and *consistency of conduct;* and these were no less conspicuous in all his after life. His reputation in college was always good, both for diligence as a scholar, and for exemplary and discreet deportment. If he did not acquire as rapidly as some others, he was always prepared for what was expected of him, always ready, and acquitted himself with honor. He was scrupulously regardful of all college duties, was never absent from prayers, and rarely, if ever, from recitations, during the whole of his college life. One of his most respectable classmates and constant friends writes thus of him: 'He was a diligent student; I think peculiarly so. It was evident that he never lost sight of the object for which he came there, and he attended to every study

prescribed, with steady perseverance. I can look back now and see evidence of maturity and soundness of judgment in this respect, which was uncommon at that age. His college course did not present much of incident, as it partook of the stability and steady attention to the object for which he came, which was afterwards so prominent a trait of his character. The loss of his sound judgment and growing attainments to the medical profession, you can appreciate better than I can.'

"He received the honors of college at his graduation, and the part assigned him on this occasion shows the estimation with which he was regarded by the authorities of the university, placing him among the most distinguished scholars of his class. After obtaining his first degree, in September, 1821, he took charge of a respectable academy in New Canaan, in his native State, where he continued two years, a very acceptable teacher. In the autumn of 1823, he relinquished this employment, and commenced the study of medicine with Dr. Woodward, then of Wethersfield, his native town, now the superintendent of the State Lunatic Hospital, Worcester, Mass. As a student of medicine, he was a close applicant, and made rapid proficiency; he availed himself of every means of acquiring professional knowledge; he was not only a diligent scholar, but was careful to watch the progress of such cases of disease as he could witness in a circuit of extensive country practice.

"His first course of medical lectures was attended in Boston, in the winter of 1825. The succeeding spring and summer he spent with his former preceptor, and devoted much time in visiting the sick, to ascertain the character and progress of disease. The following winter was spent in New Haven, attending the medical lectures in Yale College. In March, 1826, he received the degree of Doctor of Medicine. In both these institutions, he

obtained a high reputation as a scholar, and at his graduation he acquitted himself so well as to take the very first rank in his class.

"Returning from college, he again entered the office of Dr. Woodward as assistant in his practice, where he continued more than a year, attending extensively to the sick, and teaching the preliminary branches of study to a class of medical students. During this long intercourse, a warm friendship was formed between the preceptor and pupil, which continued till his death.

"Dr. Belden pursued the study of his profession with the ardor of a scholar and the spirit of a philanthropist. He loved his profession, because he considered it honorable and useful; he felt the responsibility that awaited him, and he was too conscientious to commence the practice of it without a thorough knowledge of its principles, and a faithful improvement of all his advantages for clinical knowledge and experience.

"In the autumn of 1827, he took up his residence in Springfield, where he soon gained a respectable practice, and became the favorite physician of many of the best families in the town.

"Dr. Belden had none of those shining qualities which commend themselves at first sight to the fancy of the many; he was not destined to be the popular man. He was peculiarly diffident and retiring; his manners were simple, but his deportment was dignified and reserved. He could obtain friends and business only by substantial merit. His success was not rapid, but permanent; those who once employed him rarely failed to adhere to him; the more extensive their acquaintance, the more they respected and loved him. To many he was the 'beloved physician,' rendered no less so by the amiable qualities of his heart, his upright and honorable deportment amongst men, than by his sagacity and tact as a physician. He

made no bustle in his business, and no display in the community in which he resided; but now that he is dead, they will realize that a man is gone from amongst them, whose influence, though quiet and gentle as the evening zephyr, has been wide and salutary, diffusing intellectual light and moral beauty wherever it was felt and known; that a physician has departed from their midst, in whose skill there was safety, in whose integrity there was confidence, in whose character there was rectitude unwavering, and in whose countenance ever beamed benevolence and philanthropy.

"Unlike many young men, Dr. Belden continued the habits of study through life, which he had early formed. In the intervals of his business, he was rarely found absent from his 'study.' Here he applied himself closely to professional reading, literature, and general intelligence. He was a thorough scholar, the *last* as well as the first year of his professional life. The readers of your Journal cannot have forgotten his lucid history of the case of Jane C. Rider, well known as the 'Springfield Somnambulist,' which occupied two weekly numbers of your periodical, and detailed, with great accuracy and precision, the wonderful phenomena of that remarkable case. This, with a popular work, published somewhat previously, on the same subject, constitute all the writings from his pen which have been given to the public. There are many things, however, in manuscript, which show his diligence in recording facts, no less than his ardor in the pursuit of knowledge.

"During the last year, Dr. Belden had interested himself in effecting a change in the Medical Society of this State. At their annual meeting in the spring, he presented his views to the Society in person, in so clear and perspicuous a manner as to induce those present to consider the subject seriously. A large and respectable committee was

appointed to act upon it, of which Dr. Belden was a member. Their report is just published, which recommends such changes as to meet the views of all who have interested themselves in it, retaining many of the old, and adopting some of the new, principles proposed by their author.

"Dr. Belden was married in May, 1829, to Miss Catharine Chester, daughter of Stephen Chester, Esq., late Sheriff of the County of Hartford, Conn.,—an amiable and accomplished lady, who survives him to mourn the loss of one of the best of husbands and kindest and most indulgent of men. He left no children; having lost an only son in early childhood.

"Few men are better situated to enjoy life than was Dr. Belden at the time of the attack of this fatal disease. His domestic relation was peculiarly felicitous; he was in the midst of an intelligent and enterprising population, who justly appreciated his medical attainments and moral worth. Beloved by his friends, respected by all who knew him, rising in reputation in his profession by the surest of all means—knowledge of his business and devotion to his patients, he had gained a character of sterling value in an extensive circle of practice. In the midst of this prosperity came the withering hand of disease and cut him off.

"The fever which terminated his life was mild in its apparent character, but lurking mischief was undermining the 'issues of life.' He went through the regular stages of disease, and was supposed to be slowly convalescing by himself and his medical friends. Strength and appetite had returned; he was able to walk to his favorite 'study,' where was the field of his most interesting pursuits. But these favorable appearances were delusive; fatal disease was preying upon him; a sudden hemorrhage sunk him rapidly, no remedies arrested its progress, and he died in

a few hours after the first apprehension of danger. His preparation for the fatal event, with a full knowledge of its approach, was as calm as if he had been preparing for a journey, or the reception of his friends. He made his will, gave directions about his property, resigned himself to the will of his Heavenly Father, and awaited the event in quiet submission. In this trying situation, with his friends weeping around him, he never lost his self-possession; his sedate and dignified deportment was the same in death as in life. He finished what was necessary for him to do, took leave of his friends, and expired. A friend, who witnessed his calm departure, thus writes: 'I have thought of you as one whom he loved and venerated; as one with whom he was so intimately associated during a portion of his life, that your opportunities of knowing him were greater than most of his friends possessed. I have longed to see you and to talk with you of the heavenly calm which marked the closing hours of his life, and the truly Christian preparation which was so distinctly manifested in his life and conversation. I have longed to hear from your own lips the tribute which I know you would pay to the worth of his intellect and heart. I am sure of your sympathy, for I know how you must have valued the friend we have lost.'

"Of the character of Dr. Belden, we may justly say it had no shades, no dark spots which his friends would desire to conceal or remove, no eccentricity which gave it the slightest singularity. From his childhood he loved truth, simplicity and virtue, and these were his eminent qualities. His well balanced mind led him to right views of every subject; he discriminated well, and judged correctly. His acute moral sense kept him in the strictest path of rectitude. A motive to do wrong never actuated him for a moment; his integrity was above suspicion. His mind was more distinguished for solid than for brilliant

traits; he had no dazzling qualities. He loved to investigate the truths of science and philosophy. His knowledge was of the substantial kind; he made no display of it, but it came to his aid when and where he needed it. As a physician, he had few equals of his age. He was a ripe scholar in the principles of his profession, and he made the best use of his experience. His Index Rerum shows how careful he was to note facts and references, and what stores of medical knowledge he was amassing. He was useful no less as a scholar than as a physician, and he was preparing for still greater usefulness and distinction.

"How desirable that such a man should live! And now that he is gone, how desirable is it to the living, as well as to the dead, that he was such a man! A long and intimate acquaintance with him left us ignorant of his faults; if his character had blemishes, they were invisible, surrounded and swallowed up as they were in estimable and amiable qualities. We love to contemplate the man, to look upon one so pure and blameless in life, fulfilling the relations of son, husband and father, brother and friend, in a manner so acceptable to all. His life was exemplary and well spent, his death a calm and dignified departure from scenes less congenial to his pure spirit, to the blessed fruition of a heavenly inheritance prepared by his Redeemer above.

"His loss is great to us all; to his family and relatives irreparable; but hardly less deeply to be felt by that circle of friends whose physician he was, whose affections he had secured, and who, on every return of affliction and suffering, will lament, with renewed sorrow, his premature departure."

NOTE B.

The following cases, in which the immovable apparatus was tried, occurred in my practice during the last year:

CASE I.

A young man had his leg fractured, six inches below the knee, by the fall of a barrel of flour in unlading a vessel. Both bones were broken. Considerable tumefaction existed. A bandage of strips was applied, and the fragments accurately supported by compresses and outside splints rolled in a splint-cloth. On the seventh day, the swelling and tenderness were so far reduced that I applied the splints of soaked pasteboard, and bandages soaked in starch. On the third day after this, the limb could be handled in any manner without pain, and the patient was able to sit at the window in a chair. On the fifteenth day from the accident, he was, without difficulty, conveyed in a chaise to the wharf, and put on board a vessel. The only inconvenience of the apparatus was occasioned by the diminished size of the limb leaving a space between the skin and splints.

CASE II.

A middle aged man, the master of a coasting vessel, fractured his ulna by a fall, Oct. 5th, 1839. There was but little swelling or pain. Pasteboard splints and starch bandages were immediately applied. He was allowed to attend to his ordinary business without restriction. The apparatus produced some pain and numbness about the thumb and along the radial side of the arm. It was

removed on the 22d of November, when the union was found perfect. I think there was more pain in this mode of dressing, in this instance, than in that by well padded wooden splints; but there was a great convenience in being able to attend to business without confinement.

CASE III.

A lad, seven years old, fractured both bones of his leg, July 11th, by falling with his leg entangled in a fence. The tibia slightly overlapped. The surrounding parts were moderately swelled, and painful. Powerful extension was made, which brought the bones into perfect coaptation, and produced comparative ease. A roller wet in water was applied from the toes to the knee. Over this were placed two splints of softened pasteboard, smeared with starch, and the whole was enveloped in many turns of a roller bandage soaked with starch. The first night was passed painfully, and required the use of opiates. For several succeeding nights the opiate was continued, from the force of habit, and afterwards all painful symptoms disappeared. At the end of twenty days, the apparatus was removed, and the bones found perfectly united. The splints, now perfectly moulded to the parts, were kept on fifteen days longer, and at the end of this time, the cure was completed. In this case, the immovable apparatus answered perfectly every desirable purpose.

CASE IV.

A lad of fourteen years received several severe blows upon the leg, Nov. 20th, which fractured the tibia either at the epiphysis, or just below. The whole limb was bandaged, the knee and calf enveloped in softened pasteboard, and covered with many turns of a starched bandage.

Nov. 21.—Much pain and considerable swelling and tension from the toes to the middle of the thigh. Slight febrile disturbance.

Nov. 22.—Swelling mitigated,—pain less.

Nov. 23.—Febrile disturbance continues,—nervous restlessness at night,—pain and swelling diminishing,—the knee and ham are the most painful parts, and are sore to the touch. By the 2d of December, the eleventh day from the accident, the pain had ceased; and on removal of the bandages, on account of diminution in the size of the limb, the parts looked free from swelling and inflammation. The splints were reapplied over compresses of cotton batting. For the next three days, the pain was increased, especially in the foot and toes, at the end of which time the dressings were finally removed. A moderate swelling was discernible in the tibia, just below the knee. The union of bone appears complete. At this time, the patient possessed not the least power over the limb, and it was painful to the touch along the fibula and outer edge of the foot. A sensation of prickling and numbness was also complained of. For the next thirty days, the patient was entirely unable to support any weight upon the limb, and at the end of thirty more, had but little power of voluntary motion in the two smaller toes. At the end of three months, he could walk tolerably well with a cane, had recovered the power of voluntary motion in the muscles. The plumpness of the limb was restored, but its outside was somewhat painful to the touch, and the numbness and tingling had not totally disappeared. In this case, I am at a loss to decide whether the injury sustained by the nerves of the extremity was attributable to the blow which caused the fracture, or to the rigid confinement by the apparatus. On the whole, I am inclined to believe a better result would have followed the use of the common dressings. There was some excoriation in the ham.

CASE V.

On the same day with the above, a lad of ten years fractured the ulna. The immovable dressings were immediately applied. These were followed by no swelling, and the pain was moderate. On the removal of the dressings, on the fifteenth day, the restoration of injured parts was perfect, the limb straight, and the place of fracture difficult to be discerned.

CASE VI.

In August, a child of four years fell, bending his forearm under him. The radius and ulna were fractured, with a hinge-like motion between the fragments; the forearm very crooked. A strong extending force was necessary to straighten the limb. The immovable apparatus was applied, and continued without adjustment till September 3d, the seventeenth day from the accident, when the limb was found straight and strong, with a slightly elevated ridge at the place of fracture. No pain, inconvenience, or other troublesome symptom, was complained of during treatment.

NOTE C.

The following tables were obtained by the labor of my friend and pupil, Mr. W. W. Morland. I think them worth preserving, as they exhibit concisely many important facts in regard to fracture which may aid in future investigations.

TABLES RELATING TO FRACTURE,

COLLECTED FROM THE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL, BOSTON, FROM 1821 TO 1840.

Sex.	Age.	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When Discharged.	Remarks.
Female,	45	American,		Tibia and Fibula,	Simple,	Fall,	24 days,	41 days,	
Male,	22	Irish,	Laborer,	Femur, Tibia and Fibula,	1st Simple, 2d Compound,	Blow,	18 "	45 "	
"	60	Colored,	"	Tibia and Fibula,	Compound,	"	Amputation,	Death,	
"	37	American,		" "	Simple oblique,		50 days,	79 days,	
"	56	Scotch,	Laborer,	" "	Comminuted,	Fall,		Death 16th day,	
"	14	English,		Cranium,		"		" 2d "	
"	37	American,	Laborer,	Humerus,	Simp. Cominuted		20 days,	32 days,	
"	21	"		Patella,	Compound,		86 "		
"	26	Irish,	Laborer,	Humerus,	Simple,	Blasting rocks	113 "		
"	43	American,	"	Tibia and Fibula,	Simple oblique,		54 "	88 "	
"	48	"	Pump Maker,	Femur,	Simple,	Intoxication,		Death,	
"	47	"		External condyle of Humerus&olecranon,		Fall,	No record,	No record,	
"	24	"		Fibula,		Jump,	20 days,	27 days,	
"	—			Tibia and Fibula,	Compound,	"		Death in 2 hours,	
"	24	"	Truckman,	6th Rib,			42 "	49 days,	
"	16	"	Sailor,	Femur,		Fall,	25 "	30 "	
"	15	"	"	External condyle of Hum. & Acrom. Scap.		"			
"	46	"	Fireman,	Tibia, Clavicle,		Blow,	120 "	120 "	Delayed by necrosis of bone,
"	35	"	"			Fall,	14 "	28 "	Eloped,
"	24	"	Carpenter,	Femur,	Simple oblique,	"	23 "	30 "	
"	—	"		7th and 8th Ribs,				14 "	
"	34	"	Mason,	Clavicle,		"		15 "	By request,

Male,	30	American,	Boatman,	Tibia and Fibula,	Compound,	Fall,		Death,	
"	28	Irish,	Laborer,	Humerus,	Comminuted,	Blow,			Went out before union,
Female,	44	"	Domestic,	Clavicle,		Fall,	19 days,	34 days,	
Male,	32	American,	Mariner,	Fibula,	Simple,	"		19 "	
"	51	"	Laborer,	Femur,		"		Death in 4 days,	
"	26	"	Cooper,	Olecranon Ulna, 3 short Ribs,		Fighting,		17 days,	
"	34	"	Carpenter,	Tibia and Fibula,	Compound,	Fall,	44 "	59 "	
"	25	"	Hackman,	" "	Simple,		36 "	42 "	
"	—	Irish,	Laborer,	Clavicle,	"	"	30 "	32 "	
"	35	American,	Mariner,	Tibia and Fibula,	Comminuted,				
Female,	28	Irish,		Fibula,	Compound,	Fighting,		Death,	
"	47	American,		"	"	"	42 "	42 days,	
Male,	51	Irish,	Laborer,	Clavicle,	Simple,				
"	18	American,	Hostler,	Cranium,					
Female,	32	"		Tibia and Fibula,			28 "		
Male,	—	English,	Laborer,	" "	Contused,	Run over,	Uncertain,	64 "	
"	—	American,		Radius and Ulna,	Simple,				
"	—	Madeira,		Tibia,	"		24 days,	28 "	
Female,	—	American,		Acromion Scapula,				28 "	
Male,	—	"		Femur and Little finger,	1st Simple, 2d Compound,			Death,	
"	—	Irish,	"	Femur,	Simple,	Blow,	No record,	53 days,	
"	—	American,		Humerus,	Compound,			Death in 24 hrs.	
Female,	—	"		External condyle of Humerus,		Thrown frm Carriage,		15 days, relieved,	
Male,	—	"		Cranium & Femur,	Compound,			Death in 30 min.	
"	—	"		Ribs,		Jammed,	21 days,	28 days,	
"	—	"		Tibia and Fibula,			33 "	55 "	
Female,	—	"		Patella,	Simple,	Fall,	28 "	28 "	
Male,	—	"		Fore-arm, Clavicle,			32 "	32 "	

Sex.	Age	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union	When discharged.	Remarks.
Male,	—	Irish,	Laborer,	Cranium,		Fall,		Death in 24 hrs	
"	—	"	"	Cervix Femoris,					Refractory,
"	—	American,	"	Humerus,	Compound,	Kick of horse,		9 days,	Doing well,
"	—	Irish,		Tibia and Fibula,			'Considerable' in 30 days,	54 "	
"	—	American,		Fibula,				89 "	
"	—	"		Femur,			37 days,	56 "	
"	—	"		Ribs,		Fall,		19 "	
Female,	—	"		Radius,				30 "	Relieved,
"	—	"		Cervix Femoris,		"	111 "	133 "	"
Male,	—	"		Femur, Tibia and Fibula,	"	"	30 "	50 "	
"	—	"		Tibia,	Simple,		23 "	37 "	
"	—	"		"	Compound,		32 "	46 "	
"	—	"		"	Simple,		Out of house,	30 "	"
Female,	—	"		External condyle of Humerus,		Fall on elbow,	89 days,	89 "	Could raise hand to mouth,
Male,	—	"	"	Femur,	"	Fall in a fit,	No record,	48 "	
"	—	"	"	Tibia and Fibula,	Compound,	Fall,		76 "	Amputation,
Female,	—			Femur,	Simple,	"	"		
Male,	—	Irish,	"	"	"		"		
"	42	Italian,	Gold-beater,	Tibia,	"	"	"		
"	39	American,	Laborer,	Femur,	Simp. transverse,		28 days,	64 "	
"	32	"		Tibia and Fibula,		Blow,		30 "	
"	21	"	Machinist,	Patella,		Fall,	56 "	56 "	
Female,	—	"		Femur,		"		Death in 30 days,	
Male,	34	Irish,	Laborer,	Tibia and Fibula,			34 "		
"	37	"	"	" "			Uncertain,		Had Erythema,
"	—	American,	"	Clavicle,	Simple,	"	21 days,	28 "	

Male,	22	American,		Clavicle,	Simple,	Blow,	No record,	26 days,	
"	54	"	Mason,	"	"	"	"	39 "	Broken in 2 plcs
"	—	"	Sailor,	Cranium,			34 days,	38 "	Lft parietal bone,
"	36	"	Trader,	Os temporis and Os sphenoides,		Fall,		Death in 3 days,	
"	63	"		Cranium,		Blow,		" 36 hours,	
"	27	"	Sailor,	Tibia and Fibula,	Compound,	Fall from the main-top,	26 "	46 days,	Well,
"	50	Colored,		Fibula,				15 "	Relieved,
"	21	Irish,	Laborer,	Humerus, Tibia and Fibula,	Simple,		24 "	60 "	Humerus in 3 places,
"	28	American,	"	Ilium,			20 "	24 "	Fracture from ischiatic notch over dorsum ilii to ant. sup. spin. pro.
"	—	"	Teamster,	Jaw,		Fall,	15 "	15 "	
"	34	Irish,	Laborer,	Tibia and Fibula,				No record,	
"	—	German,	Seaman,	Head of Tibia,		"	No record,	74 days,	Artificial joint,
"	—	Irish,	Laborer,	Tibia and Fibula,	"	Blow,	40 days,	64 "	Un.beg.12 days,
Female,	30	American,		" "			15 "	90 "	
Male,	57	"	Carpenter,	Ankle,		Fall,		47 "	Dislocation,
Female,	56	"		Tibia and Fibula,	"				Dismis. refract.
Male,	37	"	Laborer,	" "	"				Cured in 119 ds.
"	27	"	"	Tibia,	Compound,	Scuffle,			Amp. & Death,
"	31	"	Sailor,	Tibia and Fibula,	Simple,		34 days,	67 days,	
"	49	"	Shoe Maker,	" "	"				Amp. & Recov.
Female,	29	"		" "			No record,	35 "	
Male,	23	"	Rope Maker,	" "	"	Blow,	35 days,	38 "	Nearly united in 24 days,
"	21	"		Humerus, Tibia and Fibula,		Fall,	24 "	50 "	
"	49	"	Carpenter,	Tibia and Fibula,	Simple,	"	None,		Delir. tremens,
"	27	"	Shoe Maker,	" "	Compound,		Amputation,		Had sores, Amp
Female,	—	"	Domestic,	Patella,		Blow,		44 "	Nearly well,
"	41	"	"	Head of Radius,		Fall,		31 "	Well,

Sex.	Age	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When Discharged.	Remarks.
Male,	13	American,	Domestic,	Radius,	Simple,	Fall,		32 days,	Nearly united in 13 days,
"	30	"		Ribs,				8 "	Well,
"	26	"	Carpenter,	5th and 6th Ribs,				100 "	Respira. affected and unwell,
"	—	Irish,		Scapula,				7 "	Well,
Female,	52	American,		"		"	45 days,	45 "	
"	70	"		Acromion Scapula,				43 "	Well,
Male,	51	"	"	Ankle,	Compound,	"	46 "	46 "	Dislocation,
"	—	German,	Seaman,	Tibia,		"	55 "	82 "	
"	42	American,	Translator,	"				84 "	Intemperate,
"	32	"	Laborer,	"	Simple,	"	35 "	35 "	Well,
"	—	"	Merchant,	Femur,	"	"		59 "	"
"	35	"	Laborer,	"	"	Blow,		Death in 4 days,	Del. trem. no ex.
"	23	"	Painter,	Femur and Patella,	Comp. Comminu. & Complicated,	Fall,			Amputation and death,
"	21	"		Femur,	Simple,	"	48 "	48 "	Well,
"	17	"	Laborer,	"	"	"	40 "	69 "	"
"	22	Spaniard,	Merchant,	Radius and Ulna,			Out of house,		
"	35	American,	Hostler,	Tibia and Fibula,	"		64 days,	89 "	
"	55	"		Cervix Femoris,		"			Dis. by request,
Female,	50	"		Radius,			Out of house,		
"	30	"		"			56 days,		Relievd. fm œdem. and paralysis,
"	35	"		Tibia and Fibula,	"		57 "	57 "	
Male,	35	"	Cane worker,	Tibia,			63 "		Out of house,
Female,	73	"		Femur,					Dismiss. refrac.
Male,	24	Irish,	Laborer,	Tibia and Fibula,	Compound,		25 "	25 "	"Quite firm,"
"	22	"	"	Fibula,			22 "	32 "	Luxation of Tib.
Female,	60			Ribs,		Blown down,		Death in 45 days,	Cough, bldy spu.

Male,	51	American,	Laborer,	Cervix Scapula,			34 days,	34 days,	
"	10			Femur,	Compound and Comminuted,				Amputation,
"	19	"	Distiller,	Tibia and Fibula,	Simple,	Bursting of a still,	40 "	40 "	
"	28	"	Hostler,	" "	Compound,		25 "	42 "	
"	24	"	Laborer,	Os maxil. inferius,				18 "	Dis. by request,
Female,	33	"	Sempstress,	Tibia,			17 "		
Male,	46	"	Cabinet makr	"	Simple,	Fall,	36 "	36 "	
"	16	"		Condyle of Humer.			16 "	16 "	Splints removed,
Female,	23	"	Domestic,	Cranium,				129 "	Depress. Treph.
Male,	40	Irish,		Tibia,	"			59 "	Beg. in 29 days,
"	47	American,	Farmer,	Tibia and Fibula,	Comp. and Com.		37 "	51 "	
"	27	Irish,	Truckman,	" "	Comminuted,			57 "	Amputation,
"	34	American,		Tibia,	Compound,	Blow,	24 "	28 "	
"	32	"	Laborer,	Femur, Tibia and Fibula,	"	Fall,	42 "	42 "	
"	24	Irish,	"	Tibia and Fibula,	Comminuted,		21 "	50 "	
"	28	American,	Teamster,	Ribs,			20 "	20 "	Well,
"	11	"		Tibia,			23 "	25 "	
"	72	"		Femur,	Simple,			Death in 10 days,	Idiotic,
"	24	Irish,	Laborer,	Clavicle,		Blow,	29 "	45 days,	
"	28	"	Gardener,	Ribs,			8 "	20 "	
"	32	"	Laborer,	Clavicle,				8 "	Refrac. & not relieved,
"	47	American,	"	"			18 "	20 "	
"	64	"	Mariner,	Cervix Femoris,				130 "	Not relieved,
"	33	Irish,	Laborer,	Humer. ulna and os maxillare inferius,	Comminuted,	Jump,	Of jaw 62 ds,		Delirious,
"	27	"	"	Tibia and Fibula,	Compound,			109 "	
"	40	American,	Hatter,	Femur,			108 days,	114 "	Intemperate,
"	29	"	Laborer,	Tibia,	"	Fall,	126 "		Piece bone rem.
Female,	23	"	Domestic,	Condyle of Humer.			27 "		

Sex.	Age.	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When Discharged.	Remarks.
Male,	21	American,	Laborer,	Humerus,		Fall,	26 days,	28 days,	
"	42	"	Paper Maker,	"	Simple,		37 "		Fell in convul. fit
"	30	"	Laborer,	Patella,	"		21 "	56 "	Could then wlk.
"	13	Irish,		Femur,	"	Blow,	22 "		
"	45	American,	"	Fibula,	"	"	17 "	28 "	Well,
"	40	"	Mason,	Tibia,	Comp. and Com.		41 "	41 "	Partial un. 26 ds.
"	43	"	Ferryman,	Patella,	Simple,		30 "	45 "	Beg.to wlk 21 ds
"	62	"	Laborer,	Tibia and Fibula,			23 "	28 "	Contusion,
Female,	26	Irish,	Domestic	Femur & Fore-arm,	Comp. and Com.	Jump,		Death in 3 days,	Intemperate,
Male,	30	"	Laborer,	Ribs,			24 "	24 days,	Emphysema,
"	12	American,		Tibia,	Simple,		No record,	23 "	
"	33	"	Hostler,	Femur,		"	41 days,		Mania a potu,
"	34	"	Painter,	Cranium,		Fall,		Death in 7 days,	
"	42	Irish,	Laborer,	Clavicle,		Blow,		4 days,	Much relieved,
"	28	American,	Ship Carpent.	"			10 "	10 "	Well,
"	—	Irish,	Laborer,	Femur,	"		20 "	40 "	
"	21	"	"	Fem. Tibia & Fibu.	Comp. & Laceratd	Run over,		Death in 8 hours,	Amputation,
"	37	"	"	Os maxillare infer.	Compound,			7 days,	Much relieved,
"	22	"	Carpenter,	Fibula,			14 "	21 "	Walkd in 21ds.
"	38	"	Laborer,	Tibia and Fibula,	Comminuted,		21 "	35 "	
"	32	"	"	Metacarpal bones,	"			28 "	Relieved,
"	38	American,	"	Fibula,	Compound,		31 "		
Female,	56	"	Domestic,	Radius,	Simple,	Fall,		4 "	Much relieved,
Male,	21	"	Laborer,	Tibia and Fibula,					Fract.bx.taken off
Female,	40	Irish,	"	Clavicle,	Comminuted,		22 "	31 "	25 dys, walked on crutches in 52 dys.
Male,	36	"	"	Femur & Clavicle,	Simple,	Blow,	22 "	35 "	had ulcer on foot,
"	24	"	"	Tarsal & Metatarsal	Comminuted,			Death in 15 dys,	Gangrene, Amp.
"	21	"	"	Clavicle,	Simple,	Fall,	14 "	14 days,	
"	43	American,	Mariner,	Tibia,	"		26 "	26 "	

Female,	21	Irish,	Domestic,	Fibula,	Simple,		17 days,	26 days,	
Male,	22	"	Laborer,	Femur,	"		57 "	57 "	Slight un. 46 ds.
"	40	"	"	Femur and Ulna,	"		Ul. 14 Fem. 44	44 "	Broken 2 places
"	38	American,	"	Femur,	"		38 days,	38 "	
"	30	Irish,	"	Patella,	"	Fall of earth,		97 "	Anchy. of joint,
"	—	American,	"	Sternum and Ribs,		Fall,		Death in 3 days.	Emphysema,
"	27	Irish,	"	Ribs, Tibia & Fibu.	Comp. and Com.	"	34 "	53 days,	Fell 60 feet,
"	29	American,	"	Tibia and Fibula,	Compound,		66 "		
Female,	56	"		Femur,	"	"		Death in 30 days.	
Male,	25	Irish,	"	"	"		Slight in 86,	1 year,	Only relieved.
"	25	American,	Stone Cutter,	Fem. Radius & Ul.	"			Death in 5 days,	
"	27	Irish,	Laborer,	Tibia and Fibula,	Simple,	"	52 days,		
"	—	English,	Seaman,	Humerus,	"	Blow,	27 "		
"	25	American,	Manufacturer	Femur,	"		Out of house,		
"	18	English,	Seaman,	Humerus,	"		16 "	18 days,	
"	60	Irish,	Laborer,	Ribs,				7 "	
"	23	"	Carpenter,	Cranium,				75 "	Well,
"	31	American,	Seaman,	Ribs,		Fall,	20 "	20 "	
"	21	"	"	Femur,	"	"	32 "		
"	39	Irish,	Laborer,	Cervix Femoris,	"	"	28 "		
"	26	American,	Seaman,	Olecranon Ulnæ,	"		13 "		
"	33	"	Laborer,	Humerus,	"	Blow,	36 "		
"	32	Irish,	"	Fibula,	"	Fall,	20 "		
"	24	American,	Barber,	Tibia and Fibula,	"		28 "		
"	21	Irish,	Laborer,	Clavicle,			18 "		
"	29	American,		Tibia,	"		22 "		
"	48	"	H'dcartman,	"	"	Pushed down	49 "		
"	21	"	Seaman,	Ulna,	"	Blow,			Sent to Ma. Hos.
"	33	Irish,	Laborer,	Clavicle,	"		12 "		
"	26	American,	Wheelwright	Vertebræ,	"	Fall,		Death in 2½ ds.	
"	19	Irish,	Laborer,	Fibula,	"	"	35 "		Broken in 3 plcs
"	—	"	Tailor,	Humerus,	"		26 "	26 days,	Well,

Sex.	Age.	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When Discharged.	Remarks.
Male,	20	Irish,	Laborer,	Cranium,		Fall,		Death in 1 hour,	
"	31	American,	Hatter,	Patella,	Simp. transverse,	Jump,	19 days,	35 days,	
"	26	Irish,	Laborer,	Tibia and Fibula,	"	Fall,	58 "	58 "	
"	32	American,		Femur,	Simple,	Run over,	21 "		
"	39	"	Farmer,	Tibia and Fibula,	"				Went out before union,
"	30	Irish,	Laborer,	Femur,	"		37 "		
"	25	"	"	Cranium,			39 "	39 "	Brain pulsated,
"	—	"	"	Femur,	"		32 "	52 "	
"	56	American,	Carpenter,	Cervix Femoris,			38 "		Not firm,
"	54	"	"	Fibula,	"		21 "		Contused,
"	40	"	Laborer,	Cervix Femoris,		Fall,	65 "		
"	38	"	"	Fibula,			24 "		
"	36	Irish,	Grocer,	Cranium, Tibia & Fibula,		Run over,		Death in 24 hrs.	
"	—	"	Laborer,	Tibia,	"	Fall,	43 "		
"	28	"	"	Cranium,		Blow,			Trephin'd,&dis
"	23	Colored,	Steward	Clavicle,		"			Much rel. 24 ds.
"	32	Irish,	Laborer,	Femur,	Compound,	Fall of earth,		Death 135 days,	
"	47	American,	Seaman,	Tibia and Fibula,	Simple,	Fall,		Death in 3 days,	Delir. tremens,
"	7	"		Femur,	"	Run over,	20 "	26 days,	
"	42	"	Laborer,	7th and 8th Ribs,		Fall,		6 "	Much relieved,
"	30	Irish,	"	Femur,	"		38 "	38 "	
"	35	"	"	Tibia,	Compound,	Blow,	32 "		
"	13	American,		Femur,	"	Run over,		Death in 18 days,	
"	12	"		Os Humeri,	Simple,	Fall on ice,	31 "		Near condyles,
"	25	Irish,	"	Femur,	"	Blow,	43 "	43 days,	
"	48	American,	Clerk,	Radius and Ulna, Tibia and Fibula,	Comp. and Com.	Run over,		Death in 1 day,	
"	23	Irish,	Domestic	Os maxillare infer.	Simple oblique,	Fighting,	16 "	16 days,	

Male,	39	American,	Hackman,	Tibia and Fibula,	Simple oblique,			Death in 9 days,	
"	52	"	Cartman,	Cranium,		Run over,	20 days,	20 days,	
Female,	57	"		Cervix Femoris,			37 "	84 "	
Male,	50	Irish,	Laborer,	Tibia, Fibula and 7th Rib,	Compound and Comminuted,		55 "		
"	22	American,	"	Tibia and Fibula,	Compound,		42 "	42 "	
"	32	Irish,	"	" "	"			134 "	Bone exf. rel.
"	36	"	"	Femur,	Simple,		50 "	50 "	
"	35	American,	Ship Carpent.	Tibia and Fibula,	Compound,	Jammed,			Partial un. 52 ds.
"	43	"		Olecranon Ulnæ,		Jump,	No record,	70 "	Relieved,
"	27	"	Fireman,	Clavicle, Tibia and Fibula,	"	Jump from a locomotive,		Death in 8 days,	
"	25	Irish,	Laborer,	Tibia and Fibula,	Comp. and Com.	Run over,		Death in 7 hours,	
"	30	"	"	" "	Simple,		27 days,	84 days,	
"	27		Stoneworker,	Radius and Ulna,			28 "	28 "	
"	10	American,		External condyle of Humerus,			15 "		
"	22	Irish,	Laborer,	Femur,	Simple oblique,		46 "	80 "	
Female,	22	"	Domestic,	Clavicle & Radius,		Fall,	31 "	31 "	
Male,	35	Scotch,	Laborer,	Ribs and os maxil. inferius,		Run over,	46 "		
"	33	N. Scotia,	Seaman,	Tibia,	Simple,		23 "		
Female,	20	Irish,	Domestic,	Clavicle,	"	Fall,	28 "	31 "	
Male,	30		Laborer,	Tibia and Fibula,	"		52 "	52 "	Some un. 23 ds.
"	24	American,	Truckman,	Fibula,			29 "		
"	28	N. Scotia,	Laborer,	Olecranon Ulnæ,		"	22 "		
"	32	American,	"	Femur,				128 "	Much relieved,
"	24	Irish,	"	Tibia and Fibula,	Compound,		37 "		
"	19	American,	"	" "	Comp. and Com.	"	66 "		Some un. 47 ds.
"	17	Irish,	"	" "	Simp. transverse,	Wrestling,	32 "	32 "	Un. beg. 14 days,
"	22	"	"	" "	Comp. and Com.	Run over,		Death in 24 hrs.	
"	30	"	"	Femur,	Simple oblique,	"	69 "	69 "	'Considbl.' 14 ds

Sex.	Age	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When Discharged.	Remarks.
Female,	27	Irish,	Cook,	Fibula,		Fall,	36 days,	43 days,	Rup. tibio-tar. lig.
Male,	39	"	Laborer,	Tibia and Fibula,	Comp. and Com.	Run over,			Amputation and
Female,	43	"		" "			24 "	26 "	death,
Male,	28	"	Brick maker,	Ribs, os maxil. inf.				Death in 5 days,	
"	28	American,	Laborer,	Clavicle,		Blow,	16 "	16 days,	
"	25	"	Chaise trim.	Femur,	Simple oblique,	Fall of a log,	42 "		
Female,	45	Irish,	Washwoman	"			76 "	76 "	Some un. 45 ds.
"	57	American,	Nurse,	Fibula,			35 "	35 "	Disloca. of Tib.
Male,	68	English,	Porter,	Patella,	Transverse,		46 "		
Female,	22	"		Tibia and Fibula,	Compound,	Jump,	104 "	104 "	"Much reliev."
Male,	—	American,	Teamster,	Os maxil. inferius,		Run over,		4 "	"Relieved,"
"	45	"	Carpenter,	Femur,			37 "		"Very consid-
"	40	Swede,	Laborer,	Tibia,	Simp. transverse,	Fall,	28 "	28 "	erable,"
"	30	American,	Blacksmith,	Tib. Fib. os maxil. inf. & index finger,	Compound,	Explosion,		Death in 8 days,	Finger Amput.
"	23	"	Laborer,	Cranium,		"		8 days,	Relieved,
"	—	"	Seaman,	Humerus,		Fall of 20 ft.		Death in few hrs.	Inward disloca.
"	—	Irish,	Laborer,	Tibia,	Simple,		52 "		Erythema, in-
Female,	7	"		Os maxil. inferius,			54 "	54 days,	temperate,
Male,	28	German,	"	Ribs,		Fall of 6 feet,	19 "	19 "	No emphysema
"	33	American,	"	Tibia and Fibula,	Simp. transverse,	Push'd down	38 "		
"	30	Irish,	"	" "	Compound,	Fall of earth,		Death in 9 days,	Amputation,
"	25	American,		Ribs,				54 days,	Emphysema, —
"	23	"	Cartman,	Cranium & Tibia,	Tibia simple, Cranium crushed,	Fall frm 4th story,		Death in few hrs.	much relieved,
"	28	"	Blacksmith,	Bones of the hand,	Compound,	St'm engine,			Amp. well 34 ds.
"	40	"	Laborer,	Ulna and Fibula,			47 "	47 days,	
Female,	36	"	Domestic,	Humerus,			21 "	44 "	
Male,	28	Irish,	Seaman,	Cran. Tibia & Fibu.				Death in few hrs.	

Male,	30	American,	Teamster,	Femur,			42 days,	42 days,	Con. un. 26 ds.
"	35	"	Laborer,	Digiti,			34 "	34 "	Ps.of bone rem.
Female,	20	Irish,	Domestic,	Os innominatum,		Jump from 4th story,	38 "		Could bear little weight on leg,
Male,	17	American,	Chair maker,	Condyle of Humer.		Fall,	37 "	37 "	'Moh relieved,'
"	24	Irish,	Teamster,	Femur,	Simple,		31 "	42 "	
"	12	American,		Radius,	"				
"	32	Irish,	Stucco wrker	Femur,	Spontaneous,	Secondary syphilis,	108 "	128 "	'Much reliev.'
"	65	American,	Laborer,	Tibia and Fibula,	Comp. & Com.	Blown up,		88 "	Not relieved,
"	45	Irish,	"	" "	"			Death in 13 ds.	Right leg amp.
Female,	48	American,	Nurse,	Clavicle,		Fall,	34 "	34 days,	
Male,	27	"	Painter,	Tibia and Fibula,	"	"		105 "	Amputation,
Female,	73	"		Cervix Femoris,		"	38 "	94 "	Well,
Male,	51	English,	Laborer,	Femur,	Simple oblique,		54 "	71 "	
"	29	American,	Painter,	Ribs,		Run over,		Death in 37 ds.	Disloca. clavicle & dors.vertebræ
"	40	"	Grocer,	Fibula,			45 "	45 days,	Much relieved,
"	—	"		Tibia and Fibula,	Simple,				Record imperf.
"	26	"	Teamster,	" "	Comp.Lacerated,	"			Amputation,
"	15	Irish,		Femur,	Simple,	Fall fm horse	32 "	35 "	
"	37	German,	Laborer,	Tibia and Fibula,	"		38 "	38 "	Tol. firm 30 ds.
"	15	American,		Humerus,	"		30 "	30 "	
"	28	"	Blacksmith,	Tibia and Fibula,	Simple oblique,		90 "	46 "	
"	44	Irish,	Laborer,	Radius & Femur,	"	Blow,	34 "	70 "	
"	21	American,	Seaman,	Femur,				9 months,	Only partial,
"	31	Irish,	Laborer,	Tibia and Fibula,	Comp.Lacerated,	R. R. cars,		Death in few hrs.	Amputation,
"	29	American,	"	" "	Simple oblique,	Blow,	36 "	36 days,	
"	22	"	Truckman,	1st lumber Vertebra				42 "	No paralysis,
"	22	Irish,	Laborer,	Metacarpal bones,		Run over,	36 "		Much relieved,
"	26	"	"	Tibia,	Simp. transverse,	R. R. cars,	32 "	48 "	
"	35	"	"	"	Comminuted,	Blown over,	99 "		"

Sex.	Age.	Nation.	Occupation.	Bones Fractured.	Nature of Fracture.	Cause.	Time of Union.	When discharged.	Remarks.
Male,	21	Irish,	Laborer,	6th and 7th cervical vertebræ,		Fall of bank of earth,		Death in 30 days,	
"	35	"	"	Tibia and Ilium,				" 3 "	
"	20	American,	"	Sternum,				20 days,	Much relieved,
"	24	"	Carpenter,	Tibia and Fibula,	Simple oblique,	Fall,	18 days,	42 "	" "
"	29	Scotch,	Seaman,	Os maxil. inferius,	" transverse,	"	81 "	81 "	Well,
"	40	American,	Laborer,	Ribs,		Blow,	20 "	20 "	"
"	40	English,	Seaman,	Tibia and Fibula,	Simple,	Blow,		140 "	Some un. 25 ds.
"	24	American,	Teamster,	Tibia, Fibula and os calcis,	Compound,	Fall,		Death in 19 days,	
"	27	"	Stable keeper	Humerus,		Kick of horse,		7 "	Relieved,
"	30	Irish,	Laborer,	Pelvis,		Jammed,	17 "	25 "	Walk'd in 17 ds.
"	33	"	"	Tibia,	Simple oblique,		14 "	24 "	Bears weight,
"	55	American,	Farmer,	Cranium,		Fall,		Death in 8 hours,	Trephined,
"	25	Irish,	Laborer,	Tibia and Fibula,	Comp. and Com.	Blasting rocks		" 4 "	
"	25	"	Teamster,	Femur, Tibia and Fibula,	Compound,	Run over,	71 "	81 days,	Walks without crutches,
"	—		Mariner,	Ribs,				5 "	Much relieved,
Female,	43	American,	Domestic,	Radius and Ulna,	Simple,	Fall,	20 "	20 "	
Male,	—	Irish,	Laborer,	Clavicle,		Fall of 7 ft.	27 "	31 "	Well,
"	48	American,	Tanner,	Tibia and Fibula,	"	Blow,	49 "		Un.out of house,
"	33	"	Cordwainer,	Femur,	"	Fall,	14 "	14 "	Walked,
"	—	"	Laborer,	Os maxil. inferius,		Blow,	23 "	23 "	
"	31	"	Housewright	Tibia and Fibula,	Simp. transverse,	Fall,	32 "	32 "	Walked in 9 ds.
"	9	"		" "	Simple,		18 "	23 "	Much relieved,
"	30	"	Clergyman,	Hum. Cervix,			25 "	48 "	Used arm,
"	36	German,	Cartman,	Femur,	"	Run over,	44 "	44 "	'Tolerable,'
"	40	Irish,	Laborer,	"	"		42 "	84 "	Walked well,
"	24	American,	Painter,	Patella,	Simp. transverse,		33 "	33 "	

Male,	55	American,	Carpenter,	Tibia and Fibula,	Simple,		42 days,	42 days,	
"	33	Irish,	"	" "			39 "	39 "	Well,
"	28	German,	Sugar refiner,	Olecranon Ulnæ,		Fall,	25 "	48 "	Had ab. in axil.
Female,	76	American,		Cervix Femoris,		"	62 "	67 "	Bears weight,
Male,	30	Irish,	Laborer,	Pubis,		Jammed,	46 "	54 "	Well,
"	23	"	"	Femur,	Compound,	Blow,	52 "		Piece bone rem.
"	40	"	Seaman,	Tibia,	Simple,		31 "	31 "	
"	31	"	Laborer,	Femur,	"	Fall of a car,	'Some' in 42		Now in house,
"	25	"	Truckman,	"	"	Blow,	"		" "
"	25	American,	Stone cutter,	Tibia,	"	Fall of stone,			" "
"	9	"		Femur,	"		Pretty firm 25		" "
"	45	English,	Laborer,	Tibia,					" "

TABLE

Showing the proportionate number of cases of each bone fractured in three hundred and sixty-seven Hospital cases.

Fractures of the Tibia and Fibula,	95
" " Femur,	69
" " Tibia, singly,	38
" " Fibula, "	20
" " Humerus,	18
" " Radius, singly,	9
" " Radius and Ulna,	6
" " Ulna, singly,	4
" " Cranium,	19
" " Clavicle,	26
" " Ribs,	24
" " Sternum,	2
" " Cervix Femoris,	10
Miscellaneous cases, Scapula, Cervix Humeri, carpal and tarsal bones, Condyles, Olecranon and Acromion processes,	27
Total,	367

This table shows there are six times as many fractures of the leg and thigh as of the arm and fore-arm, fracture of the leg being the most frequent accident, then the thigh, then the fore-arm, and lastly the arm.

TABLES

Showing the average time of union, and discharge from the Hospital, of a portion of the cases of simple and compound fracture.

SIMPLE FRACTURE OF THE TIBIA AND FIBULA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 35 cases.	Av. union of 18 cases of 31 years and under.	Av. union of 17 cases upwards of 31 years.	Av. time of Discharge, 28 cases.
	Years.	Days.	Days.				
Female,	45	24	41				
Male,	37	50	79				
"	43	54	88				
"	25	36	42				
Female,	32	28	—				
Male,	32	30	30				
"	21	24	60				
"	34	34	—				
Female,	30	15	90				
Male,	31	34	67				
"	23	35	35				
"	35	64	89				
"	21	24	50				
"	62	28	28	35.08 days.	32.33 days.	38.64 days.	47.53 days.
Female,	35	57	57				
Male,	27	52	—				
"	32	42	42				
"	24	28	28				
"	26	58	58				
"	38	21	35				
"	30	27	34				
"	30	52	52				
"	24	21	50				
Female,	43	24	26				
Male,	33	38	—				
"	29	36	36				
"	24	18	42				
"	48	49	—				
"	31	32	—				
"	55	42	—				
"	33	39	39				
"	17	32	32				
"	37	38	38				
"	9	18	23				
"	19	40	40				

Males, 29 cases, united in 35.86 days. Females, 5 cases, united in 29.06 days.

COMPOUND FRACTURE OF THE TIBIA AND FIBULA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 16 cases.	Av. union for 8 cases of 27 years & upwards.	Av. union for 7 cases under 27 years.	Av. time of Discharge, 16 cases.
	Years.	Days.	Days.				
Male,	22	18	45				
"	34	44	59				
"	—	30	50				
"	27	26	46				
"	24	25	25	49.31 days.	49.05 days.	51.84 days.	59.46 days.
"	28	25	42				
"	47	37	51				
"	27	109	109				
"	27	34	53				
"	29	66	—				
"	50	55	—				
"	22	42	42				
"	24	37	—				
"	19	66	66				
Female,	22	104	104				
Male,	25	71	81				

SIMPLE FRACTURE OF THE TIBIA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 12 cases.	Av. union of 6 cases of 40 years & upwards.	Av. union of 6 cases under 40 years.	Av. time of Discharge, for 7 cases.
	Years.	Days.	Days.				
Female,	33	17	—				
Male,	46	25	36				
"	40	29	59	27.41 days.	31.33 days.	23.05 days.	35 days.
"	11	23	25				
"	43	26	—				
"	29	22	22				
"	48	49	—				
"	33	23	—				
"	40	28	—				
"	26	32	48				
"	33	24	24				
"	40	31	31				

COMPOUND FRACTURE OF THE TIBIA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 17 cases.	Av. union for cases.	Av. union for cases.	Av. time of Dis. 5 cases.
	Years.	Days.	Days.				
Male,	46	120	120 *				
"	—	32	46				
"	34	24	28	67 days.			71.02 days.
"	29	121	121 **				
"	40	41	41				
"	35	32	—				
"	35	99	***				

* Necrosis. ** Piece of bone removed. *** "Much relieved," and union.

SIMPLE FRACTURE OF THE FIBULA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 16 cases.	Av. union of 8 cases of 32 years and under.	Av. union of 8 cases upwards of 32 yrs.	Av. time of Discharge, 10 cases.
	Years.	Days.	Days.				
Male,	24	20	27				
"	32	19	19				
"	50	15	15				
"	22	22	32				
"	45	17	28				
"	22	14	21	26.43 days.	22 days.	30.87 days.	30 days.
Female,	21	17	26				
Male,	32	20	—				
"	19	35	—				
"	54	21	—				
"	38	24	—				
"	24	29	—				
Female,	36	43					
"	57	35	35				
Male,	40	47	47				
"	40	45	45				

COMPOUND FRACTURE OF THE FIBULA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 2 cases.			
	Years.	Days.	Days.	Days.			
Female,	28	42	42	36.05			
Male,	38	31	—				

FRACTURE OF THE PATELLA.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 6 cases.	Av. union of 3 cases of 30 years & upwards.	Av. union of 3 cases under 30 years.	Av. time of Discharge for 4 cases.
	Years.	Days.	Days.				
Male,	21	86	—	40.83 days.	23.23 days.	58.33 days.	41 days.
"	21	56	—				
"	30	21	56				
"	43	30	45				
"	31	19	30				
"	24	33					

FRACTURE OF THE CERVIX FEMORIS.

Sex.	Age.	Time of Union.	When Discharged.		Av. union of 6 cases.		Av. time of Discharge for 3 cases.
	Years.	Days.	Days.				
Male,	64	0	130	No relief.	43.83 days.		81.66 days.
"	39	28	—				
"	56	38	—				
"	40	65	—				
Female,	57	38	84				
"	78	38	94				
"	76	62	67				

SIMPLE FRACTURE OF THE FEMUR.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 35 cases.	Av. union of 18 cases of 30 years and under.	Av. union of 17 cases upwards of 30 yrs.	Av. time of Discharge of 27 cases.
	Years.	Days.	Days.				
Male,	22	18	45				
"	16	25	30				
"	24	23	30				
"	39	28	64				
"	40	108	114				
"	21	48	48				
"	13	22	—				
"	33	41	—				
"	47	40	69				
"	36	22	—				
"	22	57	57				
"	40	44	44				
"	38	33	33				
"	21	32	—				
"	32	42	42	37.62 days.	35.88 days.	43 days.	51.29 days.
"	3	21	—				
"	36	22	35				
"	30	37	—				
"	7	20	26				
"	22	46	80				
"	30	38	38				
"	25	43	43				
"	36	50	50				
"	25	42	—				
Female,	45	76	76				
Male,	30	69	69				
"	24	31	42				
"	45	37	—				
"	51	54	71				
"	15	32	35				
"	30	42	42				
"	44	34	70				
"	33	14	14				
"	36	44	44				
"	40	42	84				

By taking out the remarkable case in which the period of union occupied one hundred and eight days, the average time of union for the whole will be 36.25 days. For the older class of cases, 36.64 days. For the younger class, 35.88 days.

SIMPLE FRACTURE OF RADIUS AND ULNA.

Sex.	Age.	Time of Union.	When Discharged.	
	Years.	Days.	Days.	
Male,	40	14	—	Average union, 20.66 days.
Female,	43	20	20	
Male,	27	28	28	

SIMPLE FRACTURE OF THE ULNA.

Sex.	Age.	Time of Union.	When Discharged.	
	Years.	Days.	Days.	
Male,	27	28	—	Average union, 31.66 days.
Female,	43	20	—	
Male,	40	47	47	

SIMPLE FRACTURE OF THE RADIUS.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 3 cases.			Av. time of Discharge.
	Years.	Days.	Days.	Days.			Days.
Male,	13	13	32	23			44.33
"	22	22	31				
"	14	34	70				

SIMPLE FRACTURE OF THE HUMERUS.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 10 cases.	Av. union of 4 cases upwards of 30 years.	Av. union of 6 cases of 21 years & under.	Av. time of Discharge.
	Years.	Days.	Days.				
Male,	37	20	32	26.05 days.	28.05 days.	25.16 days.	36.62 days.
"	21	26	28				
"	18	16	18				
"	33	36	—				
"	12	31	31				
Female,	36	21	44				
Male,	15	30	30				
"	21	24	60				
"	21	24	50				
"	42	37	—				

SIMPLE FRACTURE OF THE CLAVICLE.

Sex.	Age.	Time of Union.	When Discharged.	Av. union of 13 cases.	Av. union of 7 cases under 30 years.	Av. union of 6 cases upwards of 30 years.	Av. time of Discharge, 12 cases.
	Years.	Days.	Days.				
Male,	35	14	28	21.15 days.	20.85 days.	21.05 days.	28.25 days.
Female,	44	19	34				
Male,	24	29	45				
"	36	22	35				
"	21	14	14				
"	21	18	—				
Female,	20	28	31				
Male,	28	16	16				
Female,	40	22	31				
"	22	31	31				
"	48	34	34				
Male,	48	18	20				
"	28	10	10				

Average union in the different sexes—Males, 8 cases, 17.62 days. Females, 5 cases, 26.08 days.

ARTICLE VIII.

THE PRESENT CONDITION, PROSPECTS AND DUTIES OF THE MEDICAL PROFESSION.

By EDWARD REYNOLDS, M. D.,
FELLOW OF THE SOCIETY.

[Read at the Annual Meeting, May 26, 1841.]

GENTLEMEN,

THE return of another anniversary of the MASSACHUSETTS MEDICAL SOCIETY, presents the usual causes of congratulation, in the harmony prevailing among its members, and the growing interest manifested in the pursuit of its important objects. United not for any private advantage, but for the advancement of medical education, and through it, the alleviation of human suffering, our periodical meetings are never unattended with pleasure or profit. Separated from each other over a wide extent of country, by the duties of a laborious profession, it is pleasant once a year to behold your familiar faces; to reciprocate the interchange of kind feelings; and to cheer each other on our arduous

way. We can hardly assemble on these short occasions without some mutual advantage. If they do not make us much wiser, they always make us happier; for we never separate without some kinder feelings, and without acquiring some new interest in each other, as well as the noble cause to which we have consecrated our talents and our lives.

In conformity to the custom of the Society, the last hour of another meeting is to be devoted to the consideration of some subject connected with medicine and surgery. It would afford me more pleasure on this occasion to be the hearer, than the speaker. I invite your attention to a few thoughts upon the present condition, the future prospects, and the consequent duties of the medical profession.

Each age, like each individual, is marked by some features peculiar to itself. The history of medicine teaches the striking fact, that it has uniformly caught the prevailing spirit of each age; and successively transmitted in its own character, a faithful representation of the folly or wisdom with which it was associated.

Our age forms no exception to this fact. Its peculiarities have become impressed upon the medical profession; modified its pursuits, and changed its character, in conformity to itself, as in all former times. It has imparted to medical investigations a large portion of its own exactness; imbued them with a full measure of its philosophical spirit and abounding zeal; with a purer, bolder love of truth; an indisposition to reverence any opinions simply because they

have grown venerable through age; a courage to prove all things, to take nothing on trust; to receive no opinion, and form no system which has not been submitted to the rigorous tests of observation and experiment; and a willingness to leave truth to work out its own way, in its own native strength, regardless of its result and its influence upon long-cherished theories.

It is a scientific spirit; the method of induction which has so long received the praise, but not the attention of philosophers,—that method for which Bacon receives all the credit, but of which, to the honor of medicine be it said, Hippocrates was the founder. The character of the age is eminently practical. All theory is regarded with more caution, and facts with more favor. The investigation of truth, less influenced by the imagination, is more under the direction of its only safe guides, observation, experience, the accurate cultivation of the senses, and rigorous analysis.

Such are the sources of the many valuable and splendid discoveries of modern science; discoveries, which constitute the chief ornament and the best boast of the age. Medicine and surgery, animated by the same improved spirit with which the sister sciences have been pursued, has kept an equal pace with them; and made more rapid advances than at any previous period, simply because a better philosophy prevails. It still represents, as in all other times, in its improved condition, the improvement of all other branches of knowledge. In the darkest ages, it

has never fallen below the prevailing level of the sciences. It shuns no comparison with them in this its brightest age. At all times, it could boast of its Sydenhams, its Harveys, and other kindred minds, whose modes of seeking truth were perfect models, and whose contributions to knowledge are stamped with the seal of endurance. It now boasts of many, who, distinguished for great accuracy of observation, and extreme caution in deduction, have been as useful by the influence of their example upon the profession at large, as by their valuable additions to medical science.

The last half century forms the most remarkable era in medical science. It has effected more, perhaps, than all other periods in improving the profession, separating it from false theories, laying for it more sure and enduring foundations, and confining it within the sphere of those facts with which it is strictly connected, and which alone afford just views of the body in health and disease, and proper indications and modes of cure. The same general spirit of improvement which has marked the progress of all the sciences, and elevated some of them to such perfection, pervades every branch of medicine and surgery. The industrious observation of facts has produced a more prevalent love of truth; banished the blind adherence to system, which so long retarded their progress; diminished the disposition so natural to the mind to search after the wonderful: and secured more respect for plain common sense in all medical matters.

Its salutary results are seen in our systems of education; in the improved modes of teaching that prevail in our schools, both public and private; in the introduction of clinical instruction at our hospitals; the important changes that have taken place in the modes of studying disease, and in the opinions respecting it; and numerous discoveries in physiology and pathology highly creditable to the science, and of great benefit to mankind; discoveries, which, among the many uncertainties of the medical art, and the difficulties that oppose the seeker after medical truth, are highly gratifying; and may be regarded, at the same time, as the rich reward of philosophical investigation, and the prelude to still greater achievement.

Such are some of the general modifications imparted to the medical profession by the intellectual character of the period with which it is associated. It may not be an unprofitable use of the present hour, to take a cursory view of some of the acknowledged improvements which have resulted from it, and which constitute the true boast of modern medicine and surgery.

The present period is distinguished for a remarkable diffusion of anatomical knowledge. No other branch of medical science exhibits the onward impulse of the age so much as anatomy. Its industrious and successful cultivation in Europe, with the brilliant results that have followed, has invested it with an unusual interest, and awakened a new diligence every where in its pursuit. Minute anatomy, especially, has

been prosecuted with extreme care; unravelled and described every organ of the body with great exactness. The aid of the microscope has revealed the nature and arrangement of some structures previously unknown; and so clearly established the value of extreme minuteness of anatomical investigation, and its practical application to the purposes of discovery, that its importance is now universally acknowledged. It is seen in some remarkable discoveries of great interest to science; and in the important physiological disclosures of which it is the foundation.

The diligent cultivation of general, especial and minute anatomy, forms a new era in the science. We are indebted to its zealous pursuit, for the extraordinary number of new and valuable works, which, for extreme accuracy of description, minuteness of detail, beautiful illustrations of art, and their excellence and perfection, have superseded those of any anterior period. It is the source of the improved modes of studying, describing, viewing and teaching anatomy now prevalent in many schools; the increased amount of knowledge demanded of Professors by the wants of the student; in the zeal for patient dissection that prevails among teachers and pupils; the more general conviction of the necessity of abundant anatomical knowledge to medical or surgical eminence; and a corresponding willingness to labor for its acquisition.

The successful cultivation of comparative anatomy, the cherished offspring of modern science, may be regarded as another evidence of medical advancement. In the culture of its ample field, so rich in physiologi-

cal treasures, the profession reaps an abundant harvest of knowledge. Its zealous pursuit, its adoption into the annual teachings of some of the best medical schools, and the deep interest it inspires, are sufficient proofs of its value. I need not remind this audience of the benefits thus conferred upon medical science, or the valuable truths thus added to physiology, by the Cuviers, the Bells, and others, who, in the pursuit of this interesting branch of study, have so admirably unfolded the philosophy of living structures, and the functions they are destined to perform; and so clearly illustrated the intimate connection between comparative anatomy and comparative physiology, and the anatomy and physiology of man. The general interest now manifested in the study of this noble science, so rich in the endless variety of its objects, and the sublime nature of the truths it unfolds, and the more comprehensive views of its paramount importance in the acquisition of physiological truth, are alike honorable to the learning and taste of the profession; and show, at the same time, an improved physiology, and a reasonable ground of expectation of future discovery in this delightful field of labor.

The diligent study of anatomy has given a great impulse to physiology as well as to medicine and surgery; stripped it of many false theories with which it was encumbered, and given it a more rational form and scientific character. The two sciences have always gone hand in hand together, mutually aiding and interpreting each other. Every advancing step in anatomy has been, at all times,

the precursor of a corresponding improvement in physiology. Its unusual progress during the last quarter of a century, and the new fields, which, almost within that period, have been laid open for its investigation, may be regarded as the harbinger of a brighter day than has yet shone upon it.

An equally fertile source of pathological truth is discovered to the profession, in the extensive cultivation of pathological anatomy. This also is the offspring almost of modern times. A few years only have elapsed since this, now "the fairest province in the land of science, was a barren and uncultivated waste;" or explored only by an occasional traveller, like Morgagni, who, in the riches gleaned from it, first made known its inexhaustible treasures. It has since been assiduously cultivated by many laborers; among whom may be mentioned with especial respect, Bichat, Baillie, Louis, Andral, Hunter, Bouillaud, Rayer, Carswell, Cruveilhier, Meckel; to whom, I perhaps may be permitted to add, in this place, our own Jackson,*—who are all endeared to every lover of science, by the valuable additions they have made to it. Their writings and museums will long outlive the perishable monuments that surviving friendship may erect to their memories.

We are greatly indebted to these individuals for a great amount of positive knowledge respecting the changes effected by disease, never possessed before, for the rectification of many errors, grown venerable by age, for an improved diagnosis, the subversion of many false systems which have prevailed to the

* J. B. S. Jackson.

disgrace of science, a great advance and improvement of the art; and though last, not least, to the spirit of philosophical inquiry, the present guiding spirit of medical study, which, whether we compare the present with the past, or look beyond the present to the future, fills us with hope and expectation.

Morbid anatomy may be regarded as one of the essential supports of the medical edifice; the chief corner-stone, upon which it may repose in security. All its teachings are facts, destined to assume a permanent place in the science. Already it has greatly improved the whole domain of medicine and surgery, and led the way to results which are a just source of professional pride, and a pleasing assurance of still higher advances towards the perfection of the art.

The astonishing progress of chemistry, is another triumph of modern times. Its application to physiology has done something to increase our knowledge, and the future prosecution of its exact labors affords the promise of more. Its application to pathology has corrected some errors, revealed some interesting truths, and suggested several therapeutic agents, of great value in the relief of disease. It is so intimately allied to the medical science, that its rapid progress cannot be regarded without deep interest, and the belief that physiology, pathology and therapeutics may look to its future discoveries for some material aid in their advance to improvement.

In enumerating the improvements of medicine, intimately connected with the above pursuits, the

first place should be given to the discovery of auscultation; for which we are indebted to the immortal Laennec, who first detected the murmur of respiration, and the several modifications it undergoes during the diseases of the chest; a discovery making us better acquainted with the physical alterations of the lungs and heart, by rendering their physical effects sensible, and second in importance to none within the whole range of medical investigation; scattering the obscurity that always rests upon this important class of diseases, to the mere observer of symptoms, and affording in many instances certainty for doubt, and the assurance of science for the doubtful suggestions of the imagination.

The science of auscultation, based as it is upon fact, experience and observation, demonstrated by the unerring results of morbid anatomy, and having truth for its foundation, has survived the reproaches of ignorance, and the various forms of opposition it was destined to encounter at its first announcement, and gradually secured the attention and respect of physicians, until its claims are universally acknowledged. No man now claims the character of an accomplished physician, who neglects its cultivation. Assiduously studied during the last twenty-five years, it has attained a great degree of perfection, and is justly regarded as the greatest triumph of modern medicine.

By the aid of this splendid discovery, the well-educated pupil is qualified to distinguish thoracic diseases, with an accuracy that would have surprised the veterans of former days; to detect them in their

incipient forms; to trace their origin, amid groups of symptoms calculated to mislead the mind, to their unsuspected source; to separate curable and incurable cases; and to act in all cases with a degree of wisdom, and occasionally with an energy, that uncertainty never secures.

But a discussion of the merits of this invaluable discovery, and the various ways in which it proves a solace to the physician, and a blessing to the sick, is obviously unfitting to the present occasion. Your own experience affords a sufficient test of its value. Your voluntary tribute of gratitude to the discoverer, is the best evidence of its claims to your respect and regard.

The thoracic cavity is not the only region which has been illumined by morbid anatomy; nor are its diseases the only affections which have put on the definite, enduring forms, with which science always invests the objects of its legitimate research. It has penetrated every region of the body; and revealed many important facts respecting their obscure diseases, that will always rank among the certain things of medicine; as the connection of typhus with a diseased state of the mucous membrane, especially the mucous glands of the bowels,—at all events, the more frequent concomitance of gastro-intestinal inflammation, whether it be a cause or an effect, than any other lesion. The same guide also exhibits the occasional connection of typhus with pneumonia, inflammation of the veins, and other lesions of other organs. It teaches, also, the fact, that from the commencement,

it is sometimes an alteration of the blood, without any appreciable lesion following the introduction of poisons and miasmata into the system.

There is much in this, and all disease, which the Creator has veiled from the penetrating gaze of human curiosity. While the destiny of man remains unchanged, this veil will never be wholly withdrawn; and the physician will be left, as now, to the humble office of a faithful observer, and a diligent recorder of facts. Facts must ever constitute his main strength. If they do not teach all things, they daily teach much that is useful and satisfactory. If we are not able to cure diseases better than our fathers, we have more definite and philosophic notions respecting them. It is something, to have escaped from the dominion of their unscientific nosographies; to hear less of inflammatory, bilious, nervous and putrid fevers; and perhaps to commit less frequent errors in practice, under the sanction of a name; to have learnt, though the lesson is taught by the triumphs of death, that the typhoid state may be developed by a number of causes wholly different from each other; to understand, when Pneumonia or Phlebitis is its base, why its course is so rapid; when the intestinal follicles is the accompanying lesion, why it is so slow; that their ultimate seat is identical, though their origins may differ, and to comprehend the reason of their varieties, in the various causes that have produced it.

The diligent pursuit of the same means has added many other important facts to our knowledge; as the inflammatory nature of acute rheumatism, and its

almost invariable co-existence with Pericarditis and Endo-Carditis. It has accumulated a rich treasury of facts in the various diseases of the brain and its membranes, and other portions of the nervous system; which relieve us of much painful uncertainty, even when our therapeutic agents are inoperative, and enable us to enjoy the pleasures of science while suffering the sorrows of unsuccessful efforts to save life.

Many valuable contributions have been made to our knowledge of the diseases of the urinary organs. The recent discoveries in animal chemistry, and the investigations of morbid anatomy, under the scientific labors of Bostock, Brodie, Prout, Bright, and others, have revealed many positive facts hitherto unknown, which cannot fail to improve the diagnosis and treatment of these difficult and insidious affections.

Such are some of the changes effected by the progress of medical science. Time forbids a further enumeration, which might with propriety be extended over the whole domain of medicine; for all diseases have submitted more or less to the revolutionary hand of modern improvement. The result, in a word, is every where more correct opinions respecting the origin, the seats, and the effects of disease, an improved diagnosis of all disease. The diagnosis of one, and that perhaps the most important class of diseases, has attained a degree of perfection that leaves little or nothing to be desired.

The modifications of Therapeutics, under the searching observation of modern science, are neither

few nor unimportant. The application of the same philosophic spirit to Therapeutics, under which the other branches of medicine have attained their present improved condition, has taught a better appreciation of the powers of nature, or that interior force, which, presiding over all the phenomena of life, is continually combating the tendencies of physical and chemical laws, and constantly striving to maintain the body in a condition of health, and to restore it in disease; a more accurate knowledge of the tendencies of all diseases to health, or to destruction; and the means best calculated to favor or combat these tendencies; the discovery of the fact, that no medicine is capable of curing any disease by its own, individual power; and that it effects a restoration to health in all disease, only in proportion as it may favor the action of nature in her restorative efforts; and a more abiding conviction, that nature is capable of curing many diseases, under a proper dietetic system, without the aid of medicine,—of which we have abundant evidence in the confiding trust of the scientific physician, and the harmless fooleries of the disciples of Hahnneman. These simple truths may be said to form the groundwork of the therapeutic revolutions of modern medicine.

Therapeutics, in less enlightened ages considered the easiest, is now known to be the most difficult branch of the medical profession; demanding, in its advance to certainty, a spirit of observation, a soundness of judgment, and a freedom from preconceived opinion, that fall to the lot of few individuals; a mind

thoroughly imbued with pathological knowledge; capable of appreciating disease, anticipating its character and tendencies, and judging accurately under every combination of circumstances, when the safety of the patient depends on a prudent trust to the operations of nature, or an active recourse to medical treatment. John Hunter used to say, "I have hope of the profession, because physicians have ceased to know all things." A better knowledge of the difficulties to be encountered, may be regarded as one of the improvements in Therapeutics, and the first necessary step to a victory of them.

It cannot be pretended, that the advances of practical medicine have been equal to the discoveries in its elementary branches. Our progress consists less in an increased power of curing disease, than in a more accurate knowledge of its causes, nature, relations and tendencies. And yet, the remarkable modifications of modern Therapeutics exhibit, amid all the obvious difficulties that invest the subject, a marked superiority in all that relates to the prevention of disease, the comfort of the patient during its continuance, and his safety; both in those cases which may be confided to nature's unaided efforts, and those requiring the energetic interference of art. This superiority is seen in the greater simplicity of its means, the introduction of some very valuable medicines, a better knowledge of the operation of all medicines, and the true share which they take in the cure. The change is not one which diminishes our

confidence in medicine. On the contrary, our belief in its utility is increased. With an expurgated pharmacopœia, a diminished array of specifics, a more rational, though less confident trust in the specific power of medicine, and the conviction, that in some cases it is useless, in others, injurious, and in others, judiciously applied, absolutely necessary to save life; it is more worthy of regard, because conjoined to a better understanding of disease, more rational views of the action of medicine, and an enlightened confidence in the powers of nature; it conduces with so much more certainty to the comfort of the sick, and the relief and cure of disease.

It would not be an unreasonable expectation, that the extension of medical light to the community should abate the prevalence of medical folly, except for the fact, that the fountains of human credulity, flowing on in undiminished fulness for six thousand years, are evidently inexhaustible. Each periodical advancement of the art has been attended with a corresponding paroxysm of abounding faith in systems remarkable for nothing so much as their absurdity. It is just so now. The present period is equally noted for medical improvement and medical folly. The noblest era of the science proves the most balmy day of medical pretension, in all its forms, from the devices of the host who attempt to practise the art without learning the science, to the various so called systems, which, emanating from the profession itself, present their claims to the notice of a believing community.

The most remarkable of these, at present, is *Homeopathy*, a system, if it deserves the name, "which sets aside all former observation; contradicts all former experience; upsets not only all theory, but all facts; declares war against the inductive science; and acknowledges no organic alterations;" which sees in all diseases, only the immaterial changes of a spiritual principle, and in all remedies, only the result of spiritual forces.*

A system which gravely tells us that diseases and their causes are not material, but merely immaterial changes in ourselves; that there is nothing in them mechanical or chemical; that they do not depend on a morbid, material principle, but are only partial alterations of spiritual, or, as Hahnneman sometimes calls it, synonymously, *dynamic life*.† That it is by the observance of symptoms alone, that the physician, however sharp-sighted he may be, can learn any thing of the nature, character or treatment of disease.‡

That the worst species of chronic diseases, and the most incurable, even by Homeopathic means, are all produced by the heroic remedies of unskilful *Allopathic* physicians.§

That the only real, fundamental and productive cause of all "*proper* or *natural* chronic diseases" (all such as are not produced by Allopathy), such as the numberless forms ranging under the name of nervous weakness, hysteria, hypochondriasis, imbecility, mania, melancholy, epilepsy, spasms of all kinds, rickets, caries, cancer, fungus hæmatodes, gout, hæmorrhoids, jaundice,

* Note A. † Note B. ‡ Note C. § Note D.

dropsy, amenorrhœa, hæmorrhage from the stomach, nose, lungs, bladder or uterus, asthma, abscess of the lungs, sterility, deafness, cataract, gravel, paralysis, lameness, and pains of a thousand kinds, is nothing more or less than the *itch*. And that all others, not falling within the legitimate sphere of this great productive cause, are generated by the miasma of syphilis or sycosis.*

That the only mode of curing any of these, is by the administration of infinitessimal doses of some agent, which given in health would produce the disease.† That these doses, to be effectual, must be infinitessimal,—the more so the better,—at all events, as infinitessimal as the millionth or the decillionth part of a grain.‡ Nay, even the aura continually streaming from one of the little sugar granules, weighing only the hundredth part of a grain, and contained in the tiny Homeopathic bottles, where it has been drying twenty years, will retain all its strength during that long period, provided the bottle has not been uncorked for use oftener than 1000 times, and snuffed up into the nostrils; or, if the patient has a catarrh or a polypus, breathed through the lips, it will be found as powerful as the real Homeopathic granule itself; cure disease not only quicker but in a more gentle manner, and, carried in the pocket ready for use on all occasions, will relieve the patient of all need both of druggist and doctor, for the remainder of his days.§

‖That the active properties of all medicines become developed in proportion to the minuteness of the dose,

* Note E. † Note F. ‡ Note G. § Note H. ‖ Note I.

and the friction or shock communicated by the number of shakes given to the vessel in which they have been dissolved, if they are to be prepared in a liquid form; and the amount of rubbing in the glass mortar, to which they are subjected when destined to assume a solid form. Such is the mighty influence of the shakes, and the friction thus communicated to medicine, that the cautious author of the system kindly warns us, in their preparation, never to exceed ten energetic shakes, from above downwards (*Schüttel Schläge*) in the former case, and the period of one hour in the latter, lest it should develop the inherent virtues of medicine to an alarming extent. Indeed, he cautions his brother Homeopaths against the dangerous shaking of the medicine ever after, if unwittingly carried about in their pockets, while visiting their patients; attributes their former ignorance of this fact to a want of accurate observation; and assures us, that a more abundant experience, and a closer observation, have at last taught him, that to obtain the necessary power locked up in a drop containing the millionth or the decillionth part of a grain of medicine, two shakes are actually as good, and even safer than ten,—of the truth of which we have no manner of doubt.*

Such are the chief elements of Homeopathy, or the "transcendental reverie of a German charlatan," as gathered from the peculiar and uncommon dialect of the Organon; which, unequalled in folly by the wildest ravings of Paracelsus, lays its bold claim to

* See Note J.

favor, as the last, the best, and the ultimate point of medical perfection.

Its progress is only another evidence of the extreme credulity in medical matters that has formed the feature of every age; the morbid love of the marvellous, which characterizes a certain portion of every community by no means the least informed; the slowness with which medical knowledge finds its way to the public mind; and the readiness with which the sick seize upon any system however absurd, which, like this, has expunged the word *incurable* from its vocabulary.* It has been forty years travelling from the obscure place of its birth to our transatlantic shores. It is probably destined, like Mesmerism, and all other kindred species of medical humbuggery, to have its run; and after, in its turn, heaping another full measure of ridicule upon the healing art, to transmit, at its death, as a compensation for the temporary injury inflicted upon a noble profession, more abundant proofs of the successful manner in which nature triumphs, under a regulated diet, over many diseases, without the help of art. From a careful observation of human nature, we have long since ceased to wonder at any credulity of the sick, however great its amount or its absurdity. But that any well-educated physician of the present day should be found among the believers or the propagators of such "mystical nonsense," excites our surprise, and must form an apology for occupying the attention of this practical audience with it.

* Note K.

Surgery, during the last thirty years, has reached a high degree of perfection. From the time of John Hunter to the present day, it has been advancing with extraordinary rapidity; laying its foundations more and more deep in healthy and morbid anatomy; continually strengthening its connections with medicine; enriching itself with pure, pathological principles; and thereby augmenting its curative power; extending its boundaries, and strengthening its claims to the dignity of a science. The nature of inflammation, the character and tendencies of its various terminations, the constitutional causes that modify its action, when acute, chronic, scrofulous, peculiar or specific, are better understood and more fully appreciated. Whence the various improvements in the treatment of wounds, whether the result of accident or the surgeon's knife, the application of ligatures, the management of fractures, simple and compound, now more or less familiar to the least observing, and so conducive to a safe and speedy cure; and not unfrequently the cause of saving not only a limb, but a life, which in former days would have been sacrificed to the prevailing ignorance of the simple principles, which first originated in the great mind of John Hunter, and have since become the common property of every well-educated physician and surgeon.

A comparison of modern surgery with that of any former period of its history, is highly creditable to the industry and talent of its present cultivators. Every department of the science has felt the influence of the pure principles with which it has become associated.

It may be seen in the improved modes of surgical education, the increased amount of knowledge required for its pursuit, the more scientific character of its writings, the improved diagnosis, and the more definite distinction between those diseases that are amenable to internal, and those which demand the aid of mechanical, remedies; between those which yield to a judicious combination of both, and those which present a malignancy that resists all remedies.

The perfection of modern operative surgery is at once the evidence of superior attainment in anatomy, and the ingenious and fearless spirit of the cultivators of this mechanical branch of the profession. The ingenuity of its devices, and the consummate skill of its execution, have never been equalled, and will probably never be surpassed. Confident in the possession of perfect anatomical knowledge, it has overleaped the barriers apparently set up by nature to its encroachments; successfully pushed its way onwards to the performance of almost miraculous feats; and shown that nothing is too delicate or too difficult to resist the efforts of its daring skill. Operative surgery has, perhaps, attained its highest point of attainment; and leaves few laurels for its future votaries, except for discoveries, which, in the progress of improvement, may, like Lithotrity, mitigate the sufferings and diminish the dangers of surgical operations, or serve as substitutes for them.

This is all well. It adds another source of confidence in our noble profession, by the assurance, that when the condition of the constitution and the

character of the disease present no obstacle to the operator, the patient may submit without fear to any effort of mechanical skill.

But surgery now boasts of a better triumph, in a diminished fondness for surgical operations among well-informed members of the profession; in a growing love of medical knowledge, an improved pathology, a more skilful diagnosis, and a better treatment of disease. From the days of John Hunter, who laid the first foundations of medical surgery, there has been a constant increase of knowledge among surgeons; a more intimate blending of the different branches of science, and a consequent diminishing love of operative surgery. The distinction between curable and incurable disease, between those cases which are capable of yielding to medical, and those which must be abandoned to mechanical treatment, is better defined. The successful cultivation of anatomy, physiology and pathology,—the peculiar professional feature of the age,—rescues a multitude of cases from the domain of mechanical, and transfers them to the curative efforts of medical surgery. The records of public and private practice exhibit a marked diminution of operations. Under the searching investigations of modern experience, the pruning-knife has been applied to surgery, as well as to medicine. Enlightened by its accurate teachings, and warned by its numerical tables, the excision of the female breast, the testicles, and other glands and parts affected with cancerous and fungoid disease, has become less frequent. A more scientific,

protracted, constitutional treatment, and a more confiding trust in nature precedes the amputation of a limb. The operation of trephining, in injuries of the head, is comparatively a rare occurrence. While we fully appreciate the merits, and admire the skill, of all necessary operations, and pay the grateful tribute of respect to the performers, the kindlier feelings of nature rise up against all which are unnecessary; and especially those which are undertaken as much for the fame of the operator, as the chance benefit of the patient; of which the records of surgery in all times, past and present, exhibit too many examples. The voice of science, as well as of nature, is now able to utter her disapprobation on all such occasions.

A view of the present condition of surgery, with its diminished taste for operations, its philosophic modes of treatment, so much simplified and improved, and its favorable results, as evinced in the various injuries of the head, the management of hernia, scrofula, compound dislocations, simple and compound fracture, aneurism,—indeed, of all external diseases,—is highly creditable to the professional head and heart. It shows the great superiority of medical to mechanical surgery, and the extent to which a more enlightened pathology has elevated the science.

The domain of operative surgery has been materially extended, by the addition of several new branches. The investigations of Stroymeyer have enriched it with Tenotomy, which, from the simplicity of its manœuvres, and its easy application to many species of distressing deformity, may be regarded as one of

its beautiful triumphs. It affords another proof of the intimate connection of anatomical research with the advancement of surgery, as well as medicine. We are indebted to morbid anatomy for the development of the unnatural condition of the joints and muscles, which first led the way to this invaluable discovery, as it has to almost every other in surgery.

Surgeons of all countries have now applied it to the numerous species of deformity originating in unnatural muscular contraction, with an amount of success as gratifying as it is useful. Its easy adaptation to the several varieties of club foot, contracted joints, torticollis and strabismus, has been almost uniformly successful, and promises materially to diminish this class of affections. The simplicity of the discovery excites our wonder that it was so long unknown; its extensive utility calls forth our gratitude to the discoverer, and our pride in an art so rich in blessings to mankind.

Plastic surgery, so successful in repairing other kinds of deformity, and certain cases of distressing disease, is another, and no mean or unimportant, addition to the art. Though not of recent origin, it has been much perfected by the talent of modern operators. It is certainly a source of gratification, that surgery, whose office has so long been that of taking away parts of the body, has at last learnt the science of forming them anew; that, having been so long a notorious scar-maker, she has now become a great scar-mender. We hail the return of the Taliacotian art, after its slumber of ages, back to

the profession. We never see a new nose skilfully replaced, a new lip transplanted from beneath the chin, or a new eyelid neatly formed from the temple, without a feeling of pleasure, greater than can be produced by the removal of a limb, however skilfully executed, or the excision of a breast, however adroitly performed.*

The last thirty years have been noted for the successful cultivation of opthalmic surgery. It is within the memory of some who hear me, when the interesting diseases of the eyes were wholly neglected in this country, or the object of attention to a number so limited, as to be incapable of proving extensively useful to the profession or the community. Its adoption into the profession may be regarded as another valuable addition to the science. The establishment of public Eye Infirmaries, where a wide field of observation is thrown open to the pupil, is eminently calculated to advance the study of pathology. Perhaps no other organ is so well adapted to the purposes of pathological observation as the eye. It presents, in its compound structure, a perfect specimen of all the tissues of the body, and, consequently, a perfect example of all its diseases. Its beautiful transparency enables us to watch the progress of morbid action with great accuracy; to discern all the modifications and consequences of inflammation in the various tissues (of course, the same in the eye as in all other parts which are concealed from view), and the effects of remedial

* See Note L.

agents; and renders it obviously one of the most easy and beautiful objects of medical study.

Our public opthalmic institutions annually send forth a large number of pupils laden with the rich fruits of an ample experience, and the abundant ability of extensive usefulness.* A general interest is awakened in the investigation of the diseases of the eyes. Opthalmic surgery is beginning to be considered a necessary branch of medical education. The time is not distant, when its high claims will be generally acknowledged here, as in Europe, by every well-educated physician. Its rich soil, so successfully cultivated by some of the most eminent pathologists, cannot be examined without a valuable harvest to all future laborers, who found their expectations of medical success on accurate pathological knowledge.†

The diseases of the ear, almost wholly neglected from the time of Hippocrates to the present day, have been carefully studied of late years. A minute study of the anatomy, structure and functions of the organ, has at last thrown some light upon its obscure affections; discovered in its middle chamber some causes of deafness previously unknown; and in the application of appropriate remedies, by the Eustachian tube, it holds out some slight hope of success in the management of a portion of its hitherto abandoned and uncomprehended diseases. A more careful dissection of the internal ear, in cases of congenital deafness, reveals some morbid changes not known before; and has added a few facts to our knowledge,

* Note M. † Note N.

if it has not increased our ability of relieving these unfortunate cases. The observations of Kramer, Delau, Itard, and others, enable us to classify the diseases of the ear; to distinguish those of the external, middle and internal chambers with tolerable accuracy; to separate incurable from curable cases; and to regulate the treatment of the latter upon more scientific principles.

A knowledge of the morbid changes of the ear, from the difficulties attending their dissection, and the small number of cases presented for inspection, is necessarily very imperfect; and will, probably, for a long time, continue to be so. It is probable, that future discoveries may increase the number of facts, without materially advancing the success of curative means. Aural surgery is, on the whole, much less satisfactory in its results, than the amount of knowledge already acquired, and the writings of its cultivators have induced us to expect. It is, notwithstanding, capable of relieving a considerable amount of disease; and may be considered, in its present improved condition, an important addition to surgical science.

These contributions to modern surgery are, of themselves, abundant evidence of its progress. But there is no part of her wide domain unmarked by the hand of improvement; no class of her many diseases, which does not exhibit proofs of more accurate knowledge, and more simple, more ingenious, and more efficient remedial agents. Wherever we turn, we find a more enlightened pathology, and,

as a natural consequence, the discovery either of new modes of treatment, or a more judicious and scientific application of those already known.

The diseases of the joints have been classified, under the light of anatomy, according to the several textures entering into the composition of these organs; their diagnostic marks settled with great accuracy; and their treatment determined upon philosophical principles, and in strict accordance with their pathological conditions. The vague ideas formerly attached to the terms, white swellings and scrofulous joints, without any well defined meaning, and indiscriminately applied to all the diseases of the joints, were, at the same time, the convenient cover of ignorance, and a prolific source of gross and fatal errors in practice.

The obscurity in which these difficult and insidious affections were formerly involved, has vanished under the clear light of anatomy, and the careful inquiries of science. Inflammation of the synovial membrane, with all its varieties and consequences—ulceration of the articular cartilages, with all their causes and dreadful results—scrofulous disease, with its constant peculiarities—and the malignant affections of the joints, are the names of things now clearly understood, and each the subject of treatment, simple, scientific, and more successful than at any former time. The pathology of all these maladies, now well known to all who have studied the subject, either in the admirable writings of Brodie, or by following the strictly inductive path opened by him for their investigation,

constitute, at the same time, a splendid evidence of the value of anatomy in its application to medical study, and one of the most satisfactory improvements of surgery.

The investigation of the diseases of the rectum, which rank among the most annoying affections of the body, has been followed by the most satisfactory results. The nature of hæmorrhoidal tumors, prolapsus, fissure, stricture, blind sinus, polypi, and some others, is now well understood; their symptoms so clearly defined, that the diagnosis is easy, and the principle of cure manifest. Their treatment is distinguished by improvements, as simple in the application, as they are successful in the relief of disease.

The pathology of the glandular system is greatly improved. The great confusion formerly resting upon the diseases of the breast and testicles, has passed away. The well-educated pupil is now able to discriminate them, under the various modifications presented by the action of inflammation, in its several varieties; to treat them with skill, and decide when they are the subject of medical, and when of surgical aid. The progress of pathology is marked by corresponding evidences of improvement in the diseases of the osseous system, the urinary organs, the specific inflammations, and, indeed, in every department of surgery. It would exhaust your patience, to speak of the improvements in the treatment of wounds and fractures, the cold water dressings, and the immoveable bandage, and the many changes in the treatment of disease, which result from the observation and

experience of modern surgery. The present occasion is obviously insufficient for the simple enumeration of the various additions to surgical pathology and therapeutics, which would singly form an ample and a useful topic of discussion. This general view suffices to show, that the present falls behind no other age in a diligent use of opportunity; and that it has perhaps made a more valuable progress than any other, since all the means of its advancement are calculated by the anatomical character of its researches, and the statistical nature of its observations, to give a greater degree of exactness both to medicine and surgery; and to found the science on truths more certain of endurance, because of a more positive character.

Another, and a most pleasing evidence of medical advancement, is the improved condition of professional feeling, the urbanity of manners, the courtesy, the kindness, the respect for the rights, the reputation and the acquirements of each other, which exist among us, and which generally characterize the members of this large society; the marked diminution of the little jealousies, the anger, and the evil speaking that, in almost all other places, and all other times, have been the reproach of the medical profession; but which this Society and the Boston Medical Association have done more, perhaps, than has been effected in any other community in the world, to wipe away from her otherwise fair escutcheon. It is seen in the harmony that prevails for the most part in our public counsels, and in our more private walk

with each other; and in the increased respect with which we are consequently regarded by an intelligent community. This is partly the result of the excellent regulations and the praiseworthy designs of this Society. It is also the evidence of a higher condition of medical attainment; an indirect proof of a more scientific pursuit of medical truth; the existence of a more fixed standard of medical reputation; and a more extended conviction that the surest path to enduring medical fame is the acquisition of accurate knowledge in anatomy, physiology and pathology, and the cultivation of the kind, honorable dispositions that generally characterize the truly scientific man.

It appears, then, that the abounding zeal and talent of the profession have greatly advanced the condition of its elementary branches. The extended cultivation of these has laid the foundation of a more accurate knowledge of disease; and led the way to many improvements in the practice both of medicine and surgery; to discoveries of great value; the addition of several new branches of surgery; improved modes of study, and an elevated moral and intellectual professional standard.

The study of morbid anatomy, especially, has given a precision to diagnosis unknown before; and otherwise elevated the science, by basing it upon the positive truths of pathology; thereby rendering it more permanent, and less liable to be subverted by the progress of future discovery. But it still remains an unfinished work. Anatomy and physiology are certain guides to many of the truths of pathology;

but not to all of them, since there are many diseases, of which these sciences teach but little; some, of which they teach nothing; and a large proportion, in which they express only the organic consequences of morbid phenomena, which are still unexplained.

Practical medicine, therefore, has not advanced in the same degree as its elementary branches. However valuable the latter have been in giving exactness to the science, and correcting many of its errors, they still leave us,—in the great practical business of the physician—studying the character of disease during life; recognizing its phenomena before they have produced fatal changes of structure; and applying the successful means of cure,—but little if at all advanced beyond the judicious, practical observers of all ages.

The great aim, therefore, of our future labors is, to render an exact knowledge of pathology more subservient to the benefit of man, in learning the causes, and in the prevention and removal of the many diseases of which he is the heir. Perfect attainment in medicine is impossible. The decree of Heaven, which writes man mortal, and the complicated and difficult nature of the inquiry, forbid even the hope of this. The facts of medicine being living phenomena, and constantly influenced and modified by a thousand agencies beyond our control, are more difficult to be seized, and correctly analyzed, than the fixed, definite objects of other sciences. Extensive knowledge, accurate observation, great soundness of judgment, and a comprehensive view of the mutual

relations of all the branches of medical study, are necessary to afford security against constant deception in the formation of correct opinions, especially in regard to the efficacy or inefficacy of remedial agents.

The retrospect of the past, however, is encouraging. While the inherent difficulties of the science tend to moderate expectation, its recent progress encourages a hope that the accurate observation, and the improved reasoning powers of its future master-spirits, may, although it must ever stop short of full attainment, excel us as much in the practical application of pathology to the cure of disease, as we have our predecessors in the condition of its elementary branches. Something may be expected from the continued cultivation of these. Statistical medicine, when its more universal application shall have corrected the errors of incompetent observation, will doubtless give greater precision to the study of medical facts, and advance the knowledge of therapeutics in common with all the other branches of the profession. The recent labors of physicians have been in the prosecution of those studies that tend to render medicine exact. The remaining labors will be those that tend to render it practical. The success that may crown this more difficult task, lies concealed in the future. Whatever be its amount, we doubt not, that it will be equally honorable to the progress of the human intellect, and in the highest degree conducive to the welfare of man.

The elevated standard of the medical profession, while it gratifies pride, and animates hope, imposes upon all its followers duties and obligations of no ordinary importance. It evidently demands more knowledge than at any previous period; and should stimulate us to an industrious pursuit of the various sciences on which it is based; a more ardent love of the science; and a stronger interest in its welfare and progress; a more careful cultivation of the observing and reasoning faculties, diligent study and extensive reading, that we may keep pace with the constantly increasing information and discoveries of the day.

The fields of anatomy are not yet exhausted. The hand of diligence will bring forth many treasures that yet lie concealed beneath the surface of its much cultivated ground. Much as morbid anatomy has already done in giving exactness to medicine, unravelling the processes, and explaining the history of disease; and teaching the physician and surgeon the true ground, both of their hopes and fears, and the proper direction of remedies; it is destined, in the hands of its future cultivators, to secure still greater triumphs, both in the knowledge and the treatment of disease. It should be pursued, therefore, with a diligent, but not with an exclusive spirit; remembering that it unfolds only a portion of the hidden things of pathology, and reveals only the incurable states of certain diseases, and little or nothing of many functional disorders, which constitute a large portion of the daily business of the medical practitioner. A

knowledge of these can only be derived from a faithful study of disease in the living body. Each should receive its due consideration.

The treatment of disease, until a better knowledge is obtained, must be found in a rational empyricism, based on the result of the observation of all times. The cultivation of modern medicine is not without its faults. We do not study disease in the dead body too much; but we study it in the living body too little. In the pride of more recent discovery, the merits of our predecessors are perhaps not sufficiently valued. In throwing off their consecrated errors, we may have swept away some of their valuable truths. The human mind always tends to extremes. A certain amount of skepticism emanating from high places in the profession, has propagated its contagion to a considerable extent; and may be as injurious, in some respects, to the interests of the science, as the empyricism or the dogmatism of former days.

While we concentrate the light of the exact sciences upon disease, and strive to excel those who have gone before us, in a faithful observation of the living body, correct analysis, and accurate deduction, we shall perhaps advance the interests of the profession more by a rational confidence in remedies sanctioned by the experience of all times, whether we understand their action or not, than by the indulgence of a skepticism that is not always harmless because it is fashionable; or a vanity which blinds us to the fact, that no age in medicine has been without

its accurate observers; and that our age, however brilliant in discovery, is indebted for much that is invaluable in practical medicine, to the wisdom and experience of those who have preceded us in all ages.

Since our last annual meeting, Sir Astley Cooper, the most distinguished honorary member of this Society, after having done more for the advancement of surgery than any other man since the days of John Hunter, has paid the debt of nature, and gone down to the grave full of years and honor. Those of us who were favored with his acquaintance, will ever bear his unsolicited kindness in affectionate recollection; and pay the tribute of our unqualified admiration to his wise teachings. England claims the honor of his birth. His well-earned fame is the cherished treasure of a grateful world.

Dr. Thomas Miner, another honorary member, well known by his contributions to medicine, and his various learning, adds another to our list of departed brethren. It is our painful duty to record the death of Doctors Silas Allen, James Holland, Uriah Hagar, and Nathaniel Swift, who, having faithfully served their day and generation, are gathered to the fathers,—all of them in a good old age; the eldest having attained the term of 78, and the youngest 62 years.

It is somewhat remarkable, that in a Society composed of nearly 800 members, so few should have died.

in the space of a year; and that each of these should have left, in the number of his years, so satisfactory a testimony to the healthfulness of the medical profession. Our necroscopic records present an annual evidence of the limited power of medicine; and a motive urging us to diligence in the use of the rapid period allotted to each of us for the advancement of our useful, though difficult science.

NOTES.

The following quotations, which form the basis of the statements in the text respecting Homeopathy, are from the fifth enlarged and improved edition of Hahnemann's Organon, published at Dresden, in 1833. The principles of Homeopathy, as set forth in the address, are of so extraordinary a character, that it was thought best not to publish them without quoting the author of the system, in the original language of his book; which, to the best of my knowledge, has not been translated,—at all events, not in this country.

NOTE A.

"Im gesunden Zustande des Menschen waltet die *geistartige*, als Dynamis den materiellen Körper, belebende Lebenskraft unumschränkt und hält alle seine Theile in bewundernswürdig harmonischem Lebensgange in Gefühlen und Thätigkeiten, so dass unser inwohnende,

vernünftige Geist sich dieses lebendigen, gesunden Werkzeugs frei, zu dem höhern Zwecke unsers Daseyns bedienen kann."—*Organon*, §9, p. 83.

"Wenn der Mensch erkrankt, so ist ursprünglich nur diese *geistartige*, in seinem Organism überall anwesende, selbstthätige, Lebenskraft durch den dem Leben feindlichen, dynamischen Einfluss eines krankmachenden Agens auf sie verstimmt; nur die zu einer solchen Innormalität verstimmte Lebenskraft kann der Organism die widrigen Empfindungen verleihen und ihn zu den regelwidrigen Thätigkeiten bestimmen, die wir Krankheit nennen."—*Organon*, §11, p. 84.

"Einzig die krankhaft gestimmte Lebenskraft bringt die Krankheiten hervor."—*Organon*, §12, p. 85.

"Daher ist Krankheit (die nicht der manuellen Chirurgie anheim fällt) wie von den Allöopathen geshieht, als ein von lebenden Ganzen, vom Organism und der ihr belebenden Lebenskraft gesondertes, innerlich verborgnes, obgleich noch so fein materielles Ding gedacht, ein Unding, was," &c.—*Organon*, §13, p. 85.

"Von schädlichen Einwirkungen auf den gesunden Organism durch die feindlichen Potenzen, welche das harmonische Lebensspiel von der Aussenwelt her stören, kann unsre Lebenskraft als *geistartige* Dynamis nicht anders den auf *geistartige* (*Dynamische*) Weise ergriffen und afficirt werden, und alle solche krankhafte Verstimmungen (die Krankheiten) können auch durch den Heilkunstler nicht von ihr entfernt werden, als ebenfalls durch *geistartige* (dynamische) Umstimmungs-Kräfte der dienlichen Arzneien auf unsre *geistartige* Lebenskraft, von ihr durch den in Organism allgegenwärtigen Fühlsinn der Nerven percipirt, so dass Heilarzneien, nur durch *dynamische* Wirkung auf sie, Gesundheit und Lebensharmonie wieder herstellen können."—*Organon*, §16, p. 86.

NOTE B.

"Die Krankheiten (Acute Krankheiten) der Menschen sind theils schnelle Erkrankungsprocesse der innormal verstimmten Lebenskraft. Theils sind es solche Krankheiten (chronische Krankheiten) welche bei kleinem Anfangen den lebenden Organism, jede auf ihre eigne weise *dynamisch* verstimmen," &c.—*Organon*, §72, p. 145.

NOTE C.

"Der vorurtheillose Beobachter—er kennt die Nichtigkeit üebersinnlicher Ergrübelungen, die sich in der Erfahrung nicht nachweisen lassen—nimmt, auch wenn er die scharfsinnigste ist, an jeder einzelnen Krankheit nichts, als ausserlich durch die Sinne erkennbare Veränderungen des Befindens Leibes und der Seele, Krankheitszeichen, Zufälle, Symptome wahr, das ist, Abweichungen vom gesunden, ehemaligen Zustande des jetz Kranken, die dieser selbst fühlt, die die Umstehenden an ihm wahrnehmen, und die der Artz an ihm beobachtet. Alle diese wahrnehmbaren Zeichen repräsentiren die Krankheit in ihrem ganzen Umfange, das ist, sie bilden zusammen die wahre und einzig denkbare Gestalt der Krankeit."—*Organon*, p. 79.

"Da man nun an einer Krankheit, von welcher keine sie offenbar veranlassende oder unterhaltende Ursache (causa occasionalis) zu entfernen ist, sonst nichts wahr—nehmen kann, als die Krankheitszeichen, so müssen, unter Mithinsicht, auf etwaniges Miasm und unter Beachtung der Nebenumstände, es auch einzig die Symptome seyn, durch welche die Krankheit die zu ihrer Hülfe geeignete Arznei fordert und auf dieselbe hinweisen kann—so muss die Gesammtheit dieser ihrer

Symptome, dieses nach aussen reflectirende Bild des innern Wesens der Krankheit, d. i. des Leidens der Lebenskraft, das Hauptsächlischte oder Einzige seyn, wodurch die Krankheit zu erkennen geben kann, welches Heilmittel sie bedürfe;—das Einzige, was die Wahl des angemessenten Hülfsmittels bestimmen kann—so muss, mit einem Worte die Gesammtheit der Symptome für den Heilkünstler das Hauptsächlichte, ja Einzige seyn, was er an jedem Krankheitsfalle zu erkennen und durch seine Kunst hinwegzunehmen hat, damit er geheilt und in Gesundheit verwandelt werde."—*Organon*, p. 81.

NOTE D.

"Zu den chronischen Krankheiten müssen wir noch, leider! jene allgemein verbreiteten rechnen, durch die allöopathischen Curen anhaltenden Gebrauchs heftiger, heroischer Arzneien in grosser und gesteigerten Gaben erkünstelt, durch missbrauch von calomel," &c.—*Organon*, §74, p. 148.

"Diese durch die allöopathische Unkeilkunst (am sclimmsten in den neuern Zeiten) &c. wohl nie mittel schienen erfunden oder erdacht werden zu können."—*Organon*, §75, p. 149.

NOTE E.

"Man kannte bisher nur die Syphilis einigermassen als eine solche chronisch miasmatishe Krankheit, welche ungeheilt nur nur mit dem Ende des Lebens verlischt. Die für sich und ungeheilt, gleichfalls von der Leibenskraft unvertilgbare Sycosis (Feigwartzenkrankheit) erkannte man nicht als eine innere chronisch miasmatische Krankheit, eigner art, wie sie doch unstreitig ist, und glaube sie durch Zerstörung der Auswusche auf der Haut

geheilt, zu haben, ohne das fortwährende Siechthum von ihr zu bemerken."—*Organon*, §79 p. 151.

"Die Psora, die einzig wahre Grund Ursache, und Erzeugerin aller die übrigen vielen, ja unzähligen Krankheitsformen, welche unter den Namen von Nerven Schwäche Hysteriä, Hypochondria, Manie, Melancholie, Blödsinn, Raserei, Fallsucht, und Krämpfen aller Art, von Knochenerweichung, Krebs, Blutschwamm, Afterorgansationen, Gicht, Hämorrhoiden, Gelb und Blausucht, Wassersucht, Amenorrhöa, und Blutsturz, aus Magen, Nase, Lungen, aus der Harnblasse, oder der Bährmutter, von Asthma und Lungenvereiterung, von Impotenz und Unfruchtbarkeit, von Migräne, Taubheit, grauem und Scwharzem Staar, Nierenstein, Lähmungen, Sinne Mängel und Schmertzen tausenderlei art, u. s. w. in dem Pathologien als eigne, abgeschlossene Krankheiten figuriren."—*Organon*, §80, p. 152.

NOTE F.

"Die krankhaften Symptomen, welche die Arzneien in gesunden Menschen erzeugen, sind das Einzige woraus wir ihre Krankheitheilungskraft erkennen lernen."—*Organon*, §21, p. 90.

NOTE G.

"Die Angemessenheit einer Arznei für einem gegebnen Krankheitsfall beruht nicht allein auf ihrer treffenden homöopathischen Wahl, sondern eben so wohl auf der erforderlichen, richtigen Grösse oder vielmehr *Kleinheit* ihrer Gabe."—*Organon*, §275, p. 284.

"Aus gleichem Grunde, und da eine Arznei bei vorausgesetzter, gehöriger Kleinheit ihrer Gabe um desto heilsamer und fast bis zum Wunder hülfreich ist, je homöopathischen sie ausgesucht war, wird auch eine Arznei, deren wahl passend homöopathisch getroffen

worden, um desto heilsamer seyn müssen, je mehr ihrer Gabe zu dem für sanfte Hülfe angemessensten Grade von Kleinheit herabsteigt."—*Organon*, §277, p. 286.

"Reine Erfahrung zeigt *durchgängig*, dass wenn der Krankheit nicht offenbar eine beträchtliche Verderbniss eines wichtigen Eingeweides zum Grunde liegt, und bei der cur alle andern, fremdartig arzneileichen Einwurkungen auf den Kranken entfernt gehalten wurden—die Gabe des homöopathisch gewählten Heilmittels nie so klein bereitet werden kann, dass sie nicht noch stärker, als die natürliche Krankheit wäre," &c.—*Organon*, §279, p. 287.

NOTE H.

"Vorzüglich en Dunstgestalt durch Riechen und Einziehung des stets ausströmmenden Arzneidunstes eines mit hoher Kraftentwickelung einer Arzneiflüssigkeit benetzten Streukügelschens, welches trocken in einem kleinen Fläschchen liegt, wirken die homöopathischen mittel am sichersten und kräftigsten. Die Mündung des geöffneten Fläschchens lässt der homöopathische Arzt den Kranken erst in das eine Nasenloch halten und im Einathmen die Luft, daraus in sich ziehen und dann wohl auch so, wenn die Gabe stärker seyn soll, mit dem andern Nasenloche riechen, mehr oder weniger stark, je nachdem er die gabe bestimmt und steckt es dann verstopft wieder in sein Taschen Etuis, auf dass kein Missbrauch damit getrieben werden könne, *und wenn er will nicht bedarf er so keines Apothekers mehr zu seinen Heilungen.* Ein Streukügelschen wovon 10, 20 bis 100 einen gran wiegen, mit der 30 sten potenzirten Verdünnung befeuchtet und dann getrocknet, behalt zu diesem Behufe seine volle Kraft wenigstens 18 bis 20 jahre *unvermindert*, gesetzt auch, dass das Fläschchen indess 1000 mal geöffnet worden wäre, wenn es nur vor Hitze und Sonnenlicht

verwahrt wird.—Sollten die Nasenlöcher beide durch Stockschnupfen, oder Polypen verstopft seyn, so athmet der Kranke durch den Mund, wahrend er die Mündung des Gläschens zwischen die Lippen hält.

"Dieses Einathmen des Arzneidunstes berührt die Nerven in den Wanden der geräumigen Höhlen, die er durchgeht, ungehindert, und stimmt so die Lebenskraft auf die mildeste und doch kräftigste Weise heilkräftig um, weit vorzgülicher als jede andre Art des Eingebens in Substanz durch den Mund. In der letzten Halfte dieses Jahres bin ich aber zur Ueberzeugung gelangt dass diess Reichen die Kraft der Arznei auf diesse weise, *wenigstens* in gleichem Grade von Stärke und zwar noch ruhiger als die durch den Mund genommene Gabe Arznei, und dass daher die Wiederholungs zeiten des Reichens nicht kürzer zu bestimmen seyen als bey der Einnahme der materiallen Gabe durch den Mund."—*Organon*, p. 296.

NOTE I.

"Aus gleichem Grunde steigt die Wirkung einer homöopathischen Arzneigabe, je in einem grössern Umfange von Flüssigkeit aufgelöst sie dem Kranken zum Einnehmen gereicht wird, obgleich der wahre innere Arzneigehalt derselbe bleib. Dan heir wird beim Einnehmen eine weit grössere Fläsche empfindlischer, die Arzneiwirkung annehmender Nerven berührt. Obleich, der Wahn der Theoristen in der Verdünnung einer Arzneigabe mit einer grössern Menge Flüssigheit, beim Einnehmen eine Schwächung ihrer Wirkung finder möchte, so sagt doch die Erfahrung, wenigstens bei dem homöopathischen Arzneigebrauche, gerade das Gegentheil."

"Blos die einfachsten unter allen Reitzmitteln, Wein und Weingeist, vermindern ihre erhitzende und berauschende Wirkung in der Verdünnung mit vielem Wasser."—*Organon*, pp. 293, 294.

"Durch das Wort *Innig* will ich hier so viel sagen: das wen, Z. B. der Tropfen einer arzneilichen Flüssigkeit mit 100 Tropfen Weingeist *einmal* umgeshüttelt, d. i. das beides enthaltende Gläschen, in der hand gehalten, mit *einmaligem* starkem Schlage des Arms von oben herab schnell bewegt worden ist, met zwei, drei, zehn und mehren solchen Schlägen aber diese Mischung noch weit inniger, d. i. die Arzneikraft noch weit mehr potenzirt und, so zu sagen, der Geist dieser Arznei immer mehr entfaltet, entwickelt, und in seiner Wirkung auf die Nerven weit eindringlicher gemacht wird. Wenn man als mit den tiefen Verdünnungen den so nöthigen Zweck der Verkleinerung der Gaben in Hinsicht der Milderung ihrer Kräfte auf den Organism erreichen will, so thut man wohl, jedem der 20, 30, u. s. w. Verdünnungsgläsֵser nicht mehr als zwei solche Schüttelungsschläge zu geben, und so die Arzneikraft nur *massig* zu entwickeln.

"Auch wird man wohl thun, bei der Verdünnung der Arznein in trockner Pulvergestalt mit dem Zusammenreiben in der Porcellanenen Reibeschalle Mass zu halten, und, Z. B. einen Gran der rohen, ganzen Arzneisubstanz, bei seiner Vermischung mit den ersten 100 gran Milchzucker nur eine Stunde mit kraft zu reiben, ferner die Verdunnung eines Gran dieser Mischung mit andern 100 gran Milchzucker (zu $\frac{1}{10,000}$ Verdünnung) auch nur eine Stunde, und der Dritte Verdünnung (zu $\frac{1}{1,000,000}$) ebenfalls durch einstündiges kraftiges Zusammenreiben eines Grans der vorigen Mischung mit 100 gran Milchzuker, zu einer solchen Verdünnung der Arznei zu bringen, dass die Kraftentwickelung derselben gemässigt bleibt," &c., &c. —*Organon*, p. 295.

NOTE J.

"Ich zog, um eine bestimmte und gemässigte Norm zur Kraftentwickelung der flüssigen Arzneien zu halten,

zwei Schüttel Schläge für jedes Glass den ehedem öfteren vor (bei denen sie allzu hoch potenzirt wurden) aus viel facher Erfahrung und genauer Beobachtung. Es geibt dagegen Homöopathiker, welche bei ihren Kranken Besuchen die homöopathischen Arzneien in flüssiger form mit sich herumtragen, und dennoch behaupten, dass diese mit der Zeit nicht hoher potenzirt, sich fanden, dadurch aber keinen, genauen Beobachtungsgeist, zeigen."—*Organon*, p. 281.

NOTE K.

"Und zudem wird ja die Homöopathische Arznei bei jeder Theilung und Verkleinerung durch Reiben oder Schütteln *potenzirt!* eine vor mir nicht geahnete, so machtige Entwickelung der inwohnenden Kräfte der Arzneisubstanzen, dass ich in den letztern Jahren durch überzeugende Erfahrung genothight ward, die ehemals vorgeschriebenen *Zehn* Schüttelschläge nach jeder Verdünnung bis auf *Zwei* einzuschranken."—*Organon*, p. 289.

NOTE L.

"Alles was nur durch Homöopathik geheilt werden kann, (und was könnte sie nicht, ausser den nicht manuelchirurgischen Uebeln, heilen?) an höchsten chronischen, nicht gänzlich aloöpathisch verdorbnen, so wie an acuten Krankheiten, wird am sichersten und gewissesten durch dieses Riechen gehielt."—*Organon*, p. 297.

NOTE M.

For the recent introduction of this branch of surgery into the United States, we are indebted to Dr. James Mason Warren, who, after his return from Europe,

performed several very skilful and successful operations, and directed the attention of the profession to its claims by a publication of the cases, with some interesting and valuable remarks.

NOTE N.

The New York Eye Infirmary was the first public Opthalmic Institution established in the United States. It owes its origin to Doctors John Kearney Rodgers and Edward Delafield, who founded it in 1820, at their own expense. It was chartered by the State, and adopted by the public in 1822,—from which period, it has been an exceedingly useful and flourishing institution. Its utility may be best seen in the number of patients who have received its gratuitous aid, and of pupils who have been educated under its teachings. The former amounted, by the last annual report, to 21,000. The latter probably exceeds 400. The benefit thus conferred on the public by the cure of a vast amount of disease, which, without the existence of such an institution, would have thrown many helpless individuals upon its charities; and the prevention, to say the least, of as much more, which it has effected as a school of instruction to medical students, are incalculable. Perhaps no charitable institutions possess a stronger claim upon the public favor than Eye Infirmaries; because no others exceed them in the amount of good they are capable of extending, directly or indirectly, to the community.

The Massachusetts Charitable Eye Infirmary was founded in 1824. No less than 11,280 patients have already received its aid; and a large number of pupils have been educated within its walls. Similar institutions have been established in various parts of the country, by several of these gentlemen, who, deeply impressed with its useful operation upon the profession and the public, have, with a greater or less amount of success, endeavored to extend the same blessing to other communities.

APPENDIX FOR 1837.

PROCEEDINGS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ANNUAL MEETING.

Boston, May 31.

The Annual Meeting of the Massachusetts Medical Society was held at the Society's Hall, Athenæum building, Pearl street, at 10 o'clock, A. M.

The records of the last meeting of the Society, and of the proceedings of the Counsellors during the past year, were read.

The Recording Secretary reported the names of those who have become Fellows or Honorary Members of the Society during the past year.

Voted, To proceed to the election of Counsellors.

Drs. Wyman of Roxbury, Wellington of West Cambridge, Willard of Uxbridge, Brown of Boston, Alden of Randolph, Wilder of Leominster, Bartlett of Concord, and Lewis of Boston, were appointed Scrutineers.

Voted, That the number of Counsellors in each Department be as follows, viz.:

First Department, 22; Second Department, 13; Third Department, 13; Fourth Department, 9; Fifth Department, 7; Sixth Department, 7; Seventh Department, 8; Eighth Department, 6; Ninth Department, 6; Tenth Department, 4.

The following gentlemen were elected in the several departments:

First Department—Drs. James Jackson, Benjamin Shurtleff, John C. Warren, John Randall, George C. Shattuck, Walter

Channing, Jacob Bigelow, George Hayward, Enoch Hale, Solomon D. Townsend, John Ware, Zabdiel B. Adams, David Osgood, Edward Reynolds, Jr., John Homans, Woodbridge Strong, John Jeffries, George B. Doane, Winslow Lewis, Jr., George W. Otis, Samuel Morrill, Jerome V. C. Smith.

Second Department—Drs. Joseph Kittredge, Jeremiah Spofford, Abel L. Peirson, Andrew Nichols, Edward L. Coffin, Samuel Johnson, Richard S. Spofford, Calvin Briggs, Dean Robinson, Jonathan G. Johnson, Edward A. Holyoke, Wyatt C. Boyden, Rufus Longley.

Third Department—Drs. Thomas Bucklin, John Walton, Abraham R. Thompson, Timothy Wellington, Zadok Howe, William J. Walker, John C. Dalton, Josiah Bartlett, Daniel Swan, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker.

Fourth Department—Drs. Stephen Bachelder, John Green, Edward Flint, Benjamin F. Heywood, Charles W. Wilder, Amos Parker, George Willard, John Starkweather, John G. Metcalf.

Fifth Department—Drs. Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Eli Hall, Elisha Mather, Bela B. Jones, David Bemis.

Sixth Department—Drs. Henry H. Childs, William H. Tyler, Asa G. Welch, Royal Fowler, Robert Worthington, Alfred Perry, Hubbard Bartlett.

Seventh Department—Drs. Nathaniel Miller, John Bartlett, Samuel Bugbee, Robert Thaxter, Jeremy Stimpson, Rufus Wyman, Ebenezer Alden, Noah Fifield.

Eighth Department—Drs. Hector Orr, Nathan Hayward, Ezekiel Thaxter, Paul L. Nichols, Noah Whitman, William Gordon.

Ninth Department—Drs. Alexander Read, William C. Whittredge, Andrew Mackie, Caleb Swan, Menzies R. Randall, William A. Gordon.

Tenth Department—Drs. Joseph Sampson, Aaron Cornish, Paul Swift, Henry Tuck.

CENSORS.

FOR THE FIRST MEDICAL DISTRICT, AND FOR THE SOCIETY AT LARGE.

William J. Walker, Abel L. Peirson, John Ware, Edward Reynolds, Jr., Woodbridge Strong.

FOR THE SECOND MEDICAL DISTRICT.

John Green, Benjamin F. Heywood, Charles W. Wilder, Benjamin Pond, William Workman.

FOR THE THIRD MEDICAL DISTRICT.

Stephen W. Williams, Elisha Mather, Atherton Clark, Bela B. Jones, David Bemis.

FOR THE FOURTH MEDICAL DISTRICT.

Henry H. Childs, William H. Tyler, Alfred Perry, Asa G. Welch, Charles Worthington.

COMMITTEE ON PUBLICATIONS.

Enoch Hale, John Ware, Solomon D. Townsend.

COMMITTEE ON RESIGNATIONS.

Walter Channing, Zabdiel B. Adams, John Jeffries.

Ebenezer Alden, M. D., of Randolph, was elected to deliver the next annual discourse.

The Treasurer presented and read his annual reports.

From the Report of Receipts and Expenditures, it appeared, that the balance on hand last year was $47 90

Received during the year, viz.:

For assessments, paid to the Treasurer,	881 00
Cash from Librarian,	69 60
From Treasurer of Worcester District Society,	58 00
" " of Essex South District Society,	66 00
" Secretary of Censors, First Medical District and Society at large,	142 00
Total,	$1264 50

The expenditures for the year were,	$728 80
Leaving a balance in the Treasury of	535 70
	$1264 50

From the Report on the Permanent Fund, it appears, that the whole is invested in the Massachusetts Hospital Life Insurance Company, in three policies, and, with interest to January 1, 1837, amounts to $5,745 31.

The following Report was read:

The subscribers, a committee of the Massachusetts Medical Society, appointed to examine the Treasurer's accounts, have attended to that duty, and find them correctly cast and duly vouched.

(*Signed,*) S. D. TOWNSEND,
W. STRONG.

Boston, May 29, 1837.

Voted, That the Reports of the Treasurer, and that of the Auditing Committee, be accepted.

The Report of the Committee on the Library was read and accepted.

Invitations for the Fellows of the Society to visit the Museums of the Boston Society for Medical Improvement, and the Boston Society of Natural History, were read, whereupon it was

Voted, That the thanks of the Society be presented to those Societies, for their polite invitation.

On recommendation by the Counsellors,

Voted, That the following be adopted as one of the rules and orders of the Counsellors:

"No candidate for election as a Fellow of this Society shall be finally balloted for by the Counsellors, at any meeting, except at the first stated meeting of the Counsellors, unless there be present, at the time of balloting, at least one Counsellor from the county where the candidate resides, or there be furnished a written recommendation that he be elected, from a Counsellor of the same county."

Voted, That the following Resolutions, recommended by the Counsellors, be adopted, viz.:

Resolved, That those persons who have heretofore been graduated Doctors of Medicine, by the authority of the Berkshire Medical Institution, shall be entitled to enter this Society as Fellows, upon signing the By-Laws, in the same manner as the medical graduates of Harvard College.

Resolved, That all persons who shall hereafter be graduated Doctors of Medicine, by the Berkshire Medical Institution, shall be regarded as having the same rights and privileges as the medical graduates of Harvard College, in respect to this Society.

On recommendation by the Counsellors,

Voted, That the 8th and 53d By-Laws be amended, by adding to each, after the words Harvard University, "or of the Berkshire Medical Institution." Also, that the following be added to the By-Laws, and numbered LVI:

"If any licentiate of this Society or Doctor in Medicine, graduated either at Harvard University or at the Berkshire Medical Institution, shall neglect to obtain admission as a Fellow of this Society, according to the method of the 53d By-Law, for one year after he is entitled to the same, he shall be deemed an irregular practitioner; nor shall he afterwards be admitted as a Fellow of the Society, unless he make a representation of his case in writing to the Counsellors, and satisfy them that he has had good reasons for not pursuing the steps necessary for his admission as a Fellow within the time above specified. In every such case, the Counsellors shall decide by vote whether the reasons are or are not satisfactory, and the result shall be communicated to the applicant by the Corresponding Secretary; whereupon, if the result be favorable to the applicant, and he sign the By-Laws, according to the 53d By-Law, within three months, he shall be admitted as a Fellow; and not otherwise."

Voted, That the Recording Secretary publish this 56th By-Law in one or more newspapers in every county of this Commonwealth.

Voted, That the 17th "Order" of the Society be amended,

by adding, after the words Harvard University, "and of the Berkshire Medical Institution," as often as those words occur.

Voted, That the thanks of the Society be presented to the liberal donor of the 7th volume of the Library of Practical Medicine, for his valuable donation.

On the subject of the Report of the Counsellors on Violations of By-Laws, which was published in October,

Voted, That, in the opinion of the Society, the Fellow referred to as the gentleman who had preferred charges against certain members of this Society, is not subject to censure for any thing he has done or omitted to do in the premises.

At 1 o'clock, George Hayward, M. D., read to the Society an interesting discourse on some of the Diseases of the Knee-Joint.

Voted, That the thanks of the Society be presented to Dr. Hayward for his interesting and instructive discourse.

Voted, That the meeting be dissolved.

The Fellows of the Society then proceeded to Faneuil Hall, and dined together, to the number of about two hundred.

Proceedings of the Counsellors.

OCTOBER MEETING, 1836.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, October 5, 1836, at 11 o'clock, A. M.

The records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen admitted Fellows of the Society since the last meeting of the Counsellors.

The following report from the Committee on Publications was then read:

MASSACHUSETTS MEDICAL SOCIETY.

Counsellors' Meeting, Oct. 5, 1836.

The Committee on Publications respectfully report, that they have received from the Boylston Medical Committee of Harvard University a recommendation to publish for the Society three Dissertations on the external means of exploring the condition of the internal organs, to which that committee have awarded premiums the present year. This recommendation was accompanied by the liberal proposition, on the part of the gentleman, who first made the suggestion, to be himself at the expense of publishing an edition sufficiently numerous to furnish a copy gratuitously to each Fellow and retired member of the Society, and also to present a copy, in the name of the Society, to every other respectable physician in the Commonwealth. As a compliance with the recommendation involved the Society in no responsibility, but would merely enable its Fellows to receive the benefit designed by so generous a donation, your Committee did not feel themselves called upon to wait for the instructions of the Counsellors in regard to it. They have proceeded to execute the trust thus assigned to them. The Dissertations are already printed, and will in a few days be ready for distribution. They constitute the *seventh* volume, in the Society's series, of the Library of Practical Medicine; the second volume of Dr. Bowditch's translation of Louis on Typhus, being the sixth.

The committee respectfully recommend, that the Librarian of the Society be instructed to receive the volumes, and distribute them to the Fellows and others, agreeably to the design of the liberal donor.

All which is respectfully submitted.

E. HALE, JR.,
S. D. TOWNSEND,
JOHN WARE,
} *Committee on Publications.*

***Voted*, That the report be accepted.**

***Voted*, That the thanks of the Counsellors be presented to the liberal donor of this benefaction.**

Dr. Hayward, chairman of the Committee appointed to inquire and report whether any facts have come to their knowledge of infractions of the eighth By-Law, relating to consultations, made the following report:

The Committee appointed at the stated meeting of the Counsellors, in May last, "to inquire and report whether any facts have come to their knowledge of the violation of the eighth By-Law, relating to consultations," &c., respectfully ask leave to report,—

That, at the same meeting, a communication was received from a Fellow of the Society, charging ten individuals with a violation of this By-Law, and one with a violation of the ninth By-Law. This communication was referred to the same Committee; and the Recording Secretary, at the request of the Committee, immediately after the meeting, addressed a letter to the gentleman who brought forward the charges, informing him of the appointment of the Committee, and of their readiness to receive any evidence or facts, of which he might be in possession, that would support the charges that he had advanced.

No reply, however, was made to this; and the Committee, after waiting several weeks, directed their chairman to make another application for the same purpose, which was accordingly done on the 8th of August. But no answer was received to this note till October 3d; and this was merely a repetition of the charges, with the names of the individuals, and of those of two or three not in the first letter. No evidence whatever was furnished.

The Committee cannot forbear the expression of their surprise, that any Fellow of this Society should make charges of a grave character against other Fellows,—and some of them, too, among the most respectable members of our institution,—without being prepared to exhibit the proofs on which he grounded his accusations. The Committee did not feel that they had a right to call upon the individuals thus arraigned, as they were not in possession of the slightest evidence of their guilt; and even if they did not believe them innocent,—though they certainly had no reason to think them

otherwise,—it would be a novel mode of conducting an investigation of this character, to call upon the accused to furnish evidence that might lead to their own conviction. The Committee would further remark, that one of the individuals, thus accused, is not a Fellow of the Society,—having withdrawn from it many years since,—and that his name has been inadvertently continued on the list. They would also observe, that the Fellow who is charged with violating the 9th By-Law, by recommending a patent medicine, however widely he may have deviated from the spirit of the law, has not, as will be seen by referring to it, violated its letter.

And here the Committee might close their report, by remarking, that "no facts have come to their knowledge of the violation of the 8th By-Law," which require the animadversion of the Society; but before doing this, they would respectfully invite the attention of the Counsellors to one or two points connected with this subject.

In the first place, then, they would remark, that there is a palpable difference in the conduct of those individuals, who, by accident, inadvertence, or from a belief that some good may be effected by it, have occasionally met and consulted with irregular practitioners, and the course of those, who at all times consult with such practitioners, knowing their true standing, and at the same time avow their determination of persisting in such practices.

It no doubt occasionally happens to a Fellow of this Society to be called to a patient, and to find, on his arrival, that he is in the charge of an irregular practitioner, to whom the physician is, perhaps, for the first time introduced. He may be unacquainted with his true standing, and the time may be too precious to be lost in inquiries on the subject; or, if he knows, the situation of the patient may be such, that, by refusing to act, and to act promptly, he would be justly liable to the charge of inhumanity.

Another case, and one where the course is still less doubtful, may occur. A Fellow of the Society may be called to meet a physician of good education, but who has perhaps so recently come into the State, that there has not been time for

him to be licensed by the Censors, or who, for some other cause, is not in good standing with our institution. He may be ignorant of the laws, and unacquainted with the method which he should adopt to obtain fellowship. It would be obviously unjust, to class such an individual with ignorant and designing empirics; and the proper course for a member of our Society seems, to your Committee, to be, to meet such a person, and to explain to him the nature of our institution, the object of its laws, and the mode of admission, and thus induce him to attach himself to it, and in this way give additional efficiency to our rules.

Both of the supposed cases were more likely to happen formerly, when the Society was small and its influence inconsiderable, than at present; and much more likely to occur in the country, where the practitioners are remote from each other, than in the larger towns, where, from their proximity, the character and standing of every one must be known.

Though the Committee have made these suggestions to palliate occurrences of the kind alluded to, they are at the same time of opinion, that they should be avoided at all times, as far as possible; and they deem it to be the duty of every Fellow of the Society scrupulously to adhere to the spirit of its laws. They cannot persuade themselves, that the cases, which would justify a deviation from them, can be of frequent occurrence.

The Committee would remark, in the second place, that there seems to be a misapprehension, in the minds of some, as to the object of our laws relating to consultations. There are many who affect to think, and there are perhaps a few who actually believe, that these laws are made for the benefit of the profession, when, in truth, as the least reflection will show, their sole purpose is to promote the good of the community,—to guard the public against ignorant, designing, and unprincipled pretenders. Medical men alone are competent to judge of the qualifications of the practitioners of the healing art; and it is their duty to point out a course of education to be pursued by those who intend to enter on this arduous and responsible calling. There surely can be no

ground of complaint, on the part of candidates for the medical profession, provided that it be neither difficult nor burdensome to comply with the requirements to enter it. Now it is notorious, that this is not the case in this Commonwealth, and consequently, there is nothing exclusive in the character of our regulations.

Having established, then, a course of education, and fixed the manner by which the parties are to give evidence that they have successfully pursued it, the profession are bound, by the duty which they owe to their fellow-citizens, to say to all who do not choose to pursue this course and give this evidence, that, if they undertake to practise the healing art, they will hold no professional communion with them. We have then discharged our duty to the community, and if they employ such unlicensed persons, they do it on their own responsibility; no blame can rest on us.

The regulations of our Society, in relation to those who have been educated out of the State, are neither oppressive nor unreasonable, as they have sometimes been represented, but are, on the contrary, of the most liberal character. They require only that such persons should give evidence of having gone through a course of study equal to that which is demanded by our own laws. The diplomas of all respectable institutions are received as evidence of this course, provided these institutions require as long a period of study, before the examination is made, as is done here. It may not, perhaps, be necessary to require more than this; but less could not be demanded, in justice to the public.

This, then, is all that our Society undertakes to do, in relation to practitioners of medicine in this Commonwealth. In what consists the oppression? Where is the monopoly? What are the exclusive privileges we enjoy? We merely point out a course of medical study, which we deem it necessary, for the welfare and safety of the community, for every practitioner of medicine to pursue; and if he does not choose to give evidence that he has done this, we say that we will hold no professional intercourse with him. We do nothing more; and if he be not successful in his profession, the fault may be in him; it certainly is not with us.

Can we do less than this? Should we not be wanting in our duty to the public and ourselves, if we neglected to do it? Would it be right, by consulting with such individuals, to declare to the world, as we certainly should do, that we believed them to be well-educated, when, to say the least, we have no evidence of the fact? Who has a right to complain of our course? Not our fellow-citizens; for they can employ whom they please; and the practitioners, who will not conform to our rules as to a proper course of study, cannot blame us, if we will not receive them as associates and fellow-laborers.

To deny us the privilege of determining with whom and on what terms we will hold professional intercourse, would be a gross violation of our rights, to which we ought not, and to which we never could, submit. It is an interference with our personal concerns that cannot be tolerated.

The Committee deem it proper to remark, in conclusion, that the course which this Society has adopted, in relation to consultations, seems to be fully authorized, if not actually contemplated, by the Legislature, in the act of incorporation, passed in 1781. By this act, it will be perceived, that the President and Fellows, or such officers as they may appoint, are authorized to examine candidates for the practice of physic and surgery, as to their skill in their profession; and if the officers thus appointed shall refuse to examine any candidates who may offer themselves, each and every one of the examiners shall be subject to a fine of *one hundred pounds*, to be recovered by the candidate, for his own use, in any court in this Commonwealth. And in the same act, the following forcible language is used, showing very strikingly the sentiments of the Legislature on this subject: "It is clearly of importance, that a just discrimination should be made between such as are duly educated, and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered, or perhaps lost to the community."

It is believed, that our Society will be ever anxious to

make this discrimination, and that the regulations formed for this purpose, having no private or personal object in view, will be complied with uniformly and with cheerfulness by all its members. If this be done in good faith, it cannot be doubted, that the public good will be essentially promoted, and that our institution will be regarded with increased favor by the community.

Which is respectfully submitted, by

GEO. HAYWARD,
E. HALE, Jr.,
EBEN. ALDEN,
} *Committee.*

Boston, Oct. 5, 1836.

Voted, That the report be accepted and consigned to the Committee on Publications, to be published in such medical journals, or other manner, as they shall see fit; and that it be distributed to all the members of this Society, and all other practitioners of medicine, and all medical students within this Commonwealth.

Voted, That the admission of physicians educated within this State to the privileges of license and fellowship with the Society, be referred to a committee of five, to report at the next meeting of the Counsellors.

The President, with Drs. Peirson, Walker, Strong, and Doane, were appointed the Committee.

Meeting dissolved.

FEBRUARY MEETING.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, February 1, 1837, at 11 o'clock.

The records of the last meeting were read.

The President, chairman of the Committee to whom was referred the subject of the admission of physicians educated within this State to the privileges of license and fellowship, reported; which report having been fully discussed, it was

Voted, To postpone the consideration thereof to an adjourned meeting.

Voted, That the report be re-committed to the same Committee.

Voted, That an adjourned meeting be held on the 22d inst.

ADJOURNED MEETING.

An adjourned meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, February 22d, 1837, at 11 o'clock, A. M.

Drs. S. D. Townsend and W. Strong were chosen a Committee to examine the Treasurer's accounts.

Drs. J. Jeffries and G. B. Doane were chosen a Committee to examine the Library and Cabinet.

Several resolutions, relating to small pox and vaccination, were presented by Dr. J. C. Warren.

Voted, That they be referred to a Committee of three, to report thereon at the next meeting of the Counsellors.

Drs. J. C. Warren, J. Jackson, and R. Wyman, were chosen.

The Recording Secretary read a letter from Dr. R. Worthington, relating to the Berkshire District Medical Society, announcing its dissolution.

Dr. Shattuck, chairman of the Committee to whom was re-committed the report on the admission of physicians educated within this State to the privileges of license and fellowship with this Society, made to the Counsellors at the meeting on the 1st inst., reported the same without amendment.

An amendment was then offered by Dr. Hale. After a full discussion of the subject, it was

Voted, That the action on the report be postponed to the next regular meeting of the Counsellors.

Voted, That a Committee of five be chosen to prepare and present a memorial to the General Court, upon the Act now pending before them, with a view to the establishment of an independent Board of Overseers for the Berkshire Medical Institution.

Drs. J. Jackson, E. Reynolds, S. D. Townsend, Z. B. Adams, and D. Osgood, were chosen.

SPECIAL MEETING.

May 17, 1837.

A special meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl street, this day, at 11 o'clock, A. M.

The records of the last meeting were read.

The Committee, appointed at the last meeting of the Counsellors, to prepare and present a memorial to the General Court, made the following report:

The Committee, appointed at the last meeting of the Counsellors of the Massachusetts Medical Society, to prepare and present a memorial to the General Court, upon the Act then pending before them, relative to the Berkshire Medical Institution, make the following report of their doings:

On the third day after their appointment, the Committee presented the memorial, of which a copy accompanies this report. Shortly afterwards, the chairman of the Committee was requested to attend a meeting of the Judiciary Committee of the House of Representatives, to whom the memorial had been referred. Dr. Childs having left the city, Mr. Rockwell, of Pittsfield, Speaker of the House, attended in behalf of the Berkshire Medical Institution. The views of the Society having been stated in full to the Judiciary Committee, and their reasons for wishing the overseers of the Berkshire Medical Institution to be constituted somewhat differently from the mode proposed in the pending bill, Mr. Rockwell made no objections to the same; and both he and the Committee intimated, that they regarded those views as reasonable, and would be glad to modify the bill in question so as to adopt them. This was done, and an Act was passed, a copy of which accompanies this report. The Committee trust and believe, that this law will be satisfactory to the Society, inasmuch as its provisions are such as this Society has always desired to have adopted, in regard to the Berkshire Medical Institution.

The Committee might here close their report. But they will venture to go beyond their commission so far, as to propose some resolutions, the adoption of which will, they trust, remove all cause of difficulty in respect to the Institution beforenamed; and they propose, that the Counsellors recommend the adoption of the same by the Society:

Resolved, That those persons who have heretofore been graduated Doctors of Medicine, by the authority of the Berkshire Medical Institution, shall be entitled to enter this Society as Fellows, upon signing the By-Laws, in the same manner as the medical graduates of Harvard College.

Resolved, That all persons who shall hereafter be graduated Doctors of Medicine, by the Berkshire Medical Institution, shall be regarded as having the same rights and privileges as the medical graduates of Harvard College, in respect to this Society.

All which is respectfully submitted, by

JAMES JACKSON,
S. D. TOWNSEND,
Z. B. ADAMS,
D. OSGOOD,
EDW. REYNOLDS,
} *Committee.*

Boston, April 27, 1837.

Commonwealth of Massachusetts.

To the Honorable, the Senate and House of Representatives, in General Court assembled:

In compliance with directions of the Counsellors of the Massachusetts Medical Society, the subscribers respectfully beg leave to present to you a memorial in respect to a bill, now or lately before you, entitled "an Act in addition to an Act to incorporate the Berkshire Medical Institution."

To this bill, your memorialists believe there are objections, which may not have been adverted to. To show these objections, and the occasion which the Massachusetts Medical Society have to point them out, it seems necessary to go into some historical details. From these details, it will appear, likewise, why this memorial has been presented after the bill before mentioned has passed to so late a stage.

The Berkshire Medical Institution was incorporated by an Act, dated Jan. 24, 1823. To the passage of this Act the Massachusetts Medical Society made no objection.

In the following year, that Institution petitioned the General Court to grant to its medical graduates the same privileges as belonged to the medical graduates of Harvard College. The most important of these privileges, perhaps, was, that the medical graduates of Harvard College were acknowledged and received by the Fellows of the Massachusetts Medical Society as regular practitioners of medicine and surgery. At that period, this Society objected to the grant of privileges to the medical graduates of the Berkshire Medical Institution, as it then stood. The Society were permitted to appear before a committee of the Legislature, by a committee of their own; and it was then urged by the Society, that the Berkshire Medical Institution ought not to be clothed with the same powers as were possessed by Harvard College, unless they were placed under the same restrictions and oversight as that College was; that, otherwise, the public would not have the same security against the abuse of those powers in one case, as in the other. It is well known to your honorable bodies, that the Overseers of Harvard College have a control over all the doings of its President and Fellows; so that, if any abuses of power by the President and Fellows be suggested, cognizance may be taken of the subject immediately; and that if any be discovered, they may be corrected.

It is well known, that the Overseers of the College are so constituted, as that they are a perfectly independent body, not in any way under the control of the President and Fellows whom they are to oversee. On the other hand, the Trustees of the Berkshire Medical Institution were, and are, enabled by law to elect the members of their own Board, without being subject in this, or in any of their acts, to any body of visitors or overseers. When, therefore, these Trustees prayed for new powers, the Massachusetts Medical Society protested against the grant of them, unless there were placed over these Trustees an independent Board of Overseers. It

was urged, by the Massachusetts Medical Society, that it was not safe to place reliance on the characters of the respectable gentlemen who then constituted the Board of Trustees of the Berkshire Medical Institution; that the corporation, which they formed, was a perpetual one, and liable to change in character, as it must change its members; that colleges in Great Britain had notoriously given degrees, for money, to men whom they never saw; and that similar abuses might in time be practised by institutions in this country, if not duly guarded against; and that, on the other hand, the Berkshire Medical Institution would be regarded as more respectable, and would inspire more confidence at all times, if an independent Board of Overseers should be attached to it.

The only effect of the representations of the Massachusetts Medical Society, at the time above referred to, as the subscribers believe, was, that in the Act of February 21, 1824, there was reserved by the Legislature a right to appoint a Board of Overseers at any future time.

Believing, from the considerations above referred to, that the public welfare, and the honor of the medical profession, had not been duly secured by the Acts in relation to the Berkshire Medical Institution, the Massachusetts Medical Society have never been willing to perform any act by which to countenance that Institution. This course they have pursued with reluctance, and from a sense of duty only. They have not and do not prefer any charges against the conduct of that Institution; they have never insinuated, nor do your memorialists now insinuate, that there have been any abuses of power by it; they seek only that such abuses be guarded against hereafter, in a manner proper in regard to a perpetual corporation, and as they are guarded against in the case of Harvard College.

Having thus exposed the general principles on which the Massachusetts Medical Society has acted in relation to the Berkshire Medical Institution, your memorialists proceed to state the facts, which will explain the late period of the application to the Legislature in the present case, and the immediate object of their application.

On the first day of the present month, the Counsellors of the Massachusetts Medical Society held a stated meeting. At this meeting, they were informed, verbally, by a distinguished member of the Berkshire Medical Institution, also one of the Counsellors, that a bill was then before the Legislature, respecting the conferring medical degrees by the Trustees of the Berkshire Medical Institution; and that he had made such arrangements, as that there would be attached to this bill a provision, that a Board of Overseers of that Institution should be created, with powers similar to those of the Overseers of Harvard College. He stated further, that, in accordance with a suggestion which had been made to him, he would propose, that the Board of Overseers should consist of the Senators of the four western districts, and of the Counsellors of the Massachusetts Medical Society in the same districts, provided there should be never more than twenty Counsellors elected by the Society in those districts. Such were the relations of the gentleman who gave this information to the parties concerned, that there was no reasonable doubt, that the measure proposed at his instance would be adopted, if the Massachusetts Medical Society made no objection. So far from making an objection, the Counsellors of the Society manifested the greatest satisfaction in the measure proposed; although no formal act was performed by them, as none seemed to be called for.

The Counsellors adjourned their meeting, on the day above mentioned, to Wednesday, the 22d day of February, with a hope, that, before that day, the measures proposed would be adopted by the Legislature.

On the 22d of February, the Counsellors learned, and most of them for the first time, that a bill had passed the Senate and House of Representatives, through all but its last stage, in which a Board of Overseers for the Berkshire Medical Institution was provided; but that it was made up in a manner very different from that which had been suggested to them at their meeting three weeks before.

It is to the constitution of this Board, that your memorialists wish now to call the attention of your honorable bodies.

The Trustees of the Berkshire Medical Institution are, or

may be, at their own pleasure, fifteen in number. They constitute the body to be supervised or overseen.

In the bill before you, to which reference has been made, these Trustees constitute a part of the Board of Overseers; and in the first instance, they, with the honorable Senators of the four western districts, and the President and two Secretaries of the Massachusetts Medical Society, constitute the whole Board of Overseers. It is plain, then, that *these very Trustees will constitute the major part of the body, who are to act as overseers of themselves.* The bill provides, indeed, for an addition to the Overseers; but it does not require, that such an addition shall be made, nor that, being made, it shall be maintained, when the persons so added may die or resign. The bill only provides, that a number, not exceeding fifteen, shall be added to the members before designated, *if these members shall appoint them.* If the appointment be made, it is plain, that the influence in the appointment is lodged entirely in the Trustees; so that the Board, thus constituted, cannot, in any view, be regarded as an independent Board, similar to that of Harvard College.

To these remarks, it may be added, that the bill referred to makes no provision for the time or place of the first meeting of the Board of Overseers, nor for its organization.

Your memorialists wish further to add, that, if any change be made in the constitution of the Board of Overseers, in correspondence with the views here presented, it does not appear to them important, that medical men should be selected; it is important only that the selection be such as to leave the Overseers independent of the Trustees. Medical gentlemen might take more interest in the subject than others; but, on the other hand, their avocations are necessarily such, that they would be less likely than others to attend the meetings of the Overseers.

All which is respectfully submitted, by

(*Signed*) JAMES JACKSON,
S. D. TOWNSEND,
Z. B. ADAMS,
D. OSGOOD,
EDW. REYNOLDS,
} *Committee.*

Boston, Feb. 24, 1837.

An Act in addition to an Act to incorporate the Berkshire Medical Institution.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows: SECTION 1. All medical degrees conferred upon the students in the Berkshire Medical Institution, may be conferred by the President, Trustees, and Faculty, under the same rules and restrictions as are adopted and recognized in conferring degrees of the same nature by Harvard College.

SECT. 2. Any person who shall be graduated a doctor in medicine in the Berkshire Medical Institution, shall be entitled to all the rights, privileges and immunities granted to the medical graduates of Harvard College.

SECT. 3. There shall be a Board of Overseers of the said Berkshire Medical Institution, which shall consist of the Trustees of the said Institution, the President and Secretaries of the Massachusetts Medical Society, the Senators of the Commonwealth, from the four western districts thereof, for the time *ex officio*, and the following persons and their successors to be chosen as hereinafter provided, to wit: Edward A. Newton, Julius Rockwell and Robert Campbell of Pittsfield; Charles Sedgwick and George I. Tucker of Lenox; Henry L. Sabin of Williamstown; Asa G. Welch of Lee; James C. Alvord of Greenfield; Thomas Longley of Hawley; Solomon Reed of Rowe; Elisha Leffingwell of Montague; Joseph H. Flint and Elisha Mather of Northampton; Elisha Edwards of Southampton; Gardiner Dorrance of Amherst; George Ashmun of Springfield; and William G. Bates of Westfield;—which Board shall meet each year at the annual commencement of the said Institution, and at such other times, and upon such notice, as they may prescribe; and ten members of said Board shall constitute a quorum.

SECT. 4. The said Board of Overseers shall have the same power and authority, in relation to said Institution, as belong to the Overseers of Harvard College in relation to the said College; and any vacancy that may occur therein, by the death or resignation of members, not designated by their office, shall be filled at any legal meeting thereof by the

Board, provided, that, in such election, the Trustees of said Institution shall not be entitled to vote.

SECT. 5. The Legislature shall have the power, at any time, to alter or repeal this Act.

SECT. 6. An Act in addition to "an Act regulating the practice of Physic and Surgery," approved by the Governor, on the twenty-first day of February, in the year one thousand eight hundred and twenty-four, is hereby repealed.

Voted, That the Counsellors recommend the adoption of the above resolutions by the Society.

Voted, To accept the report of the Committee.

Voted, To recommend to the Society, that the eighth and fifty-third By-Laws be amended, by adding to each, after the words, "Harvard University," the words, "or of the Berkshire Medical Institution."

Voted, That the Counsellors recommend the adoption of the following, to be added to the By-Laws, and numbered LVI:

If any licentiate of this Society, or doctor of medicine, graduated either at Harvard University or at the Berkshire Medical Institution, shall neglect to obtain admission as a Fellow of this Society, according to the method of the 53d By-Law, for one year after he is entitled to the same, he shall be deemed an irregular practitioner; nor shall he afterwards be admitted as a Fellow of the Society, unless he make a representation of his case in writing to the Counsellors, and satisfy them that he has had good reasons for not pursuing the steps necessary for his admission as a Fellow within the time above specified. In every such case, the Counsellors shall decide by vote, whether the reasons are or are not satisfactory, and the result shall be communicated to the applicant by the Corresponding Secretary; whereupon, if the result be favorable to the applicant, and he sign the By-Laws, according to the 53d By-Law, within three months, he shall be admitted as a Fellow; and not otherwise.

Voted, That the Honorary Members of the Society be enti-

tled to the original communications of the Society, on application to the Librarian.

Voted, To dissolve the meeting.

JUNE MEETING.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl street, June 1, 1837, at 10 o'clock, A. M.

The Corresponding Secretary read reports of the Censors of the First and Second Medical Districts.

Voted, To proceed to the election of officers for the ensuing year.

Drs. Willard of Uxbridge, Green of Lowell, and Adams of Boston, were appointed Scrutineers.

The following gentlemen were elected to the several offices, viz.:

GEORGE C. SHATTUCK, M. D., *President.*
NATHANIEL MILLER, M. D., *Vice President.*
ENOCH HALE, M. D., *Corresponding Secretary.*
JOHN HOMANS, M. D., *Recording Secretary.*
WALTER CHANNING, M. D., *Treasurer.*
DAVID OSGOOD, M. D., *Librarian.*

CENSORS,

FOR THE FIRST MEDICAL DISTRICT, AND FOR THE SOCIETY AT LARGE.

William J. Walker, Abel L. Peirson, John Ware, Edward Reynolds, Jr., Woodbridge Strong.

FOR THE SECOND MEDICAL DISTRICT.

John Green, Benjamin F. Heywood, Charles W. Wilder, Benjamin Pond, William Workman.

FOR THE THIRD MEDICAL DISTRICT.

Stephen W. Williams, Elisha Mather, Atherton Clark, Bela B. Jones, David Bemis.

FOR THE FOURTH MEDICAL DISTRICT.

Henry H. Childs, William H. Tyler, Alfred Perry, Asa G. Welch, Charles Worthington.

COMMITTEE ON PUBLICATIONS.

Enoch Hale, John Ware, Solomon D. Townsend.

COMMITTEE ON RESIGNATIONS.

Walter Channing, Zabdiel B. Adams, John Jeffries.

Ebenezer Alden, M. D., of Randolph, was chosen to deliver the next annual discourse.

The reports of the Treasurer and of the Auditing Committee were then read and accepted.

Voted, That the town of Middleton, not now included within the limits of any District Medical Society, be annexed to the Essex South District Medical Society.

Voted, That the Committee on Publications be authorized to publish a revised edition of the By-Laws and Orders, with a corrected list of Fellows of the Society.

Voted, That the same Committee publish the amendments adopted since 1832, with a corrected list of Fellows, to be distributed to the Fellows of the Society.

Dr. John C. Warren, chairman of the Committee, appointed at the meeting of the Counsellors in February last, to whom were referred several resolutions relating to small pox and vaccination, read a report, accompanied with the two following resolutions:

Resolved, That it is desirable, to effect such a modification of the laws, on the subject of small pox, as would allow persons affected with this disease to remain in their own houses.

Resolved, That the Counsellors of this Society feel undiminished confidence in the influence of vaccination in preventing the contagion of small pox.

Voted, That the foregoing resolutions be adopted.

Voted, That the Committee on Publications select and publish an eighth volume of the Library of Practical Medicine, provided, that the expense do not exceed six hundred dollars, to be distributed to the Fellows of the Society at the next annual meeting, on the same terms as were established for the first volume, by the report accepted February 1, 1831.

Provided, that the Committee shall be authorized to issue the eighth volume at any time during the current year that

they shall think proper, to be distributed to such Fellows of the Society as shall pay their assessments in advance for the next year.

Voted, That the Librarian be authorized to sell the sixth volume of the Library of Practical Medicine to such Fellows as shall hereafter be admitted to the Society, one copy to each, for $1 25.

Voted, That the meeting be dissolved.

Dr. John B. Kittredge of Framingham, has had leave to resign fellowship.

S. P. Hildreth, M. D., of Marietta, Ohio, has been elected an Honorary Member of the Society.

The following gentlemen have been admitted in course Fellows of the Society, viz.:

Chester Parkhurst, Salem; Samuel Fish, Boston; Marcellus Bowen, South Boston; Luther Clark, Boston; Frederick Allen, West Roxbury; Artemas Z. Brown, Hubbardston; Alonzo Chapin, Boston; James A. Stetson, Quincy; Herman B. Inches, Boston; George A. Bethune, Boston; Henry G. Wiley, Boston; George Stearns, Groton; Daniel W. Davis, Wellfleet; William D. Peck, Sterling; Abel H. Wilder, Groton; Amos B. Bancroft, Groton; Charles Chase, Chelsea; Bennett Wing, West Barnstable; Elijah W. Carpenter, Upton; Charles H. Pierce, Boston; C. Minot Weld, Boston; John W. Gorham, Boston; Moody Mansur, Lowell; Jacob Hayes, East Boston; George Hubbard, Boston; Samuel West, Jr., New Bedford; Daniel Parker, Billerica; Jeffries Wyman, Boston; John H. Wright, Northampton; Henry Orcutt, Westhampton.

The following gentlemen have been elected during the year, and, having declared their assent to the By-Laws, have become Fellows of the Society, viz.:

Benajah Ticknor, Charlestown; Simeon E. Strong, Ipswich; Philander H. Thomas, Hancock; Enoch Pierce, Pittsfield; Worham L. Fitch, Otis.

The following gentlemen have been elected Fellows, but

have not yet signified their acceptance of fellowship, and their assent to the By-Laws, viz.:

Robert Robinson, Henry P. Phillips, Snell Babbitt, George Hill, Orlando Long, Elisha L. Hawkes, Thomas A. Brayton, North Adams; George L. Barker, South Adams; Lansing J. Cobb, Cheshire; Henry L. Sabin, Ebenezer Emmons, James Smedley, Williamstown; Robert Campbell, Oliver S. Root, Thomas A. Lee, Lewis Wheeler, William Colman, Pittsfield; Stephen Reed, Richmond; Thomas Minor, Dudley Leavitt, West Stockbridge; Benjamin F. Kittredge, Hinsdale; Jonas Brown, Peru; Vassal White, Chester J. Frieland, Becket; William Bennet, Otis; William Sabin, Tyringham; Corridon Giteau, Charles McAllister, Lee; Aretas Rising, Scoville, New Marlborough; Warren, Great Barrington; Silas R. Kellogg, Oliver Peck, Sheffield; Henry D. Chapman, Egremont.

APPENDIX FOR 1838.

PROCEEDINGS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ANNUAL MEETING.

Boston, May 30.

The Annual Meeting of the Massachusetts Medical Society was held at the Society's Hall, Athenæum building, Pearl street, at 10 o'clock, A. M.

The records of the last meeting of the Society, and of the proceedings of the Counsellors during the past year, were read.

The Recording Secretary reported the names of those who have become Fellows or Honorary Members of the Society during the past year.

Voted, To proceed to the election of Counsellors.

Drs. Bemis of Springfield, Heywood of Worcester, Stimpson of Dedham, Dalton of Lowell, Hurd of Charlestown, Hooker of East Cambridge, Tuck of Barnstable, and Roby of Boston, were appointed Scrutineers.

The following gentlemen were elected in the several departments, viz.:

First Department. Suffolk.—Drs. James Jackson, Benjamin Shurtleff, John C. Warren, John Randall, George C. Shattuck, Walter Channing, Jacob Bigelow, George Hayward, Enoch Hale, Solomon D. Townsend, John Ware, Zabdiel B. Adams, David Osgood, Edward Reynolds, Jr., John Homans, Woodbridge Strong, John Jeffries, George B. Doane, Winslow Lewis, Jr., George W. Otis, Samuel Morrill, Jerome V. C. Smith.

Second Department. Essex.—Drs. Joseph Kittredge, Jeremiah Spofford, Abel L. Peirson, Andrew Nichols, Edward L. Coffin, Samuel Johnson, Richard S. Spofford, Calvin Briggs, Dean Robinson, Jonathan G. Johnson, Edward A. Holyoke, Wyatt C. Boyden, Rufus Longley, George Choate, George Osborn, Ebenezer Hunt.

Third Department. Middlesex.—Drs. Thomas Bucklin, John Walton, Abraham R. Thompson, Timothy Wellington, Zadok Howe, William J. Walker, John C. Dalton, Josiah Bartlett, Daniel Swan, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker, Nehemiah Cutter.

Fourth Department. Worcester.—Drs. Stephen Bachelder, John Green, Edward Flint, Benjamin F. Heywood, Charles W. Wilder, Amos Parker, George Willard, John Starkweather, John G. Metcalf, Pierson T. Kendall, John S. Butler, Joseph Stone.

Fifth Department. Hampshire, &c.—Drs. Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Eli Hall, Elisha Mather, Bela B. Jones, David Bemis.

Sixth Department. Berkshire.—Drs. Henry H. Childs, William H. Tyler, Asa G. Welch, Royal Fowler, Robert Worthington, Alfred Perry, Hubbard Bartlett.

Seventh Department. Norfolk.—Drs. Nathaniel Miller, John Bartlett, Samuel Bugbee, Robert Thaxter, Jeremy Stimpson, Rufus Wyman, Ebenezer Alden, Noah Fifield.

Eighth Department. Plymouth.—Drs. Hector Orr, Nathan Hayward, Ezekiel Thaxter, Paul L. Nichols, Noah Whitman, William Gordon.

Ninth Department. Bristol.—Drs. Alexander Read, William C. Whittredge, Andrew Mackie, Caleb Swan, Menzies R. Randall, William A. Gordon.

Tenth Department. Barnstable.—Drs. Aaron Cornish, Joseph Sampson, Paul Swift, Henry Tuck.

The Treasurer presented and read his annual reports.

From the Report of Receipts and Expenditures, it appeared, that the balance on hand last year was $535 70

Cash received of Fellows at annual meeting,	$594	
" " " at other times,	174	
		768 00
" " Treasurer of Worcester District,		73 00
" " " of Essex South District,		46 00
		$1422 70
By expenditures during the year,		1223 61
Leaving a balance in the Treasury of		$199 09

From the Report on the Permanent Fund, it appears, that the whole is invested in the Massachusetts Hospital Life Insurance Company, in three policies, and, with interest to January 1, 1838, amounts to $6061 30.

The following Report was then read.

The Committee appointed to examine the accounts of the Treasurer, have attended to that duty and respectfully report, that the permanent fund, on the first day of January, 1838, amounted to the sum of $6061 30:

That the account current has been accurately kept, cast and duly vouched and that the balance in the Treasury now is $199 09.

(*Signed,*) WILLIAM J. WALKER,
WOODBRIDGE STRONG.

Boston, May 29, 1838.

Voted, To accept the Report of the Treasurer and that of the Auditing Committee.

A Report, adopted by the Counsellors, in February, was read, together with the following vote:

Voted, That the Counsellors recommend to the Society at the next Annual Meeting, that the 36th By-Law be amended, by inserting after the words "in every case," the following, "except in the cases described in the 39th By-Law," and that the 39th By-Law be amended, by omitting the words "after the payment of the fee as prescribed in the 36th By-Law."

Voted, To adopt the recommendations of the Counsellors,

contained in the vote passed in February last, and to amend the by-laws accordingly.

Dr. G. Hayward offered the following resolutions which were unanimously adopted.

The Fellows of the Massachusetts Medical Society, feeling undiminished confidence in the protective power of Cow Pox, have learnt with great satisfaction, that the Legislature of this Commonwealth, at their late session, have repealed all the sections of the Revised Statutes relating to the Small Pox. This measure, however, makes it important that means should be adopted to render more general the practice of vaccination, so as to give our fellow-citizens the best possible security against a loathsome and oftentimes fatal disease.

It is, therefore, *Resolved*, That this Society will, at the Annual Meeting in May, furnish to all its Fellows who may apply for it, vaccine virus, free of expense; and the Counsellors are requested to adopt measures to carry this resolution into effect.

Resolved, That it shall be the duty of every Fellow of this Society, to vaccinate gratuitously in each Monday in the month of June annually, all persons who may come to him for that purpose, and who are unable to pay the usual fee.

Resolved, That the Recording Secretary be directed to give publicity to these resolutions, by inserting them in the newspapers in which the advertisements of the Society are printed, and in any other way that the Counsellors may think proper.

At 1 o'clock, Ebenezer Alden, M. D., read an interesting discourse on the Origin and Progress of the Massachusetts Medical Society.

Voted, That the thanks of the Society be presented to Dr. Alden for his very able, interesting and eloquent discourse.

Voted, That a Committee of one Counsellor from each department be appointed to consider and propose a plan for collecting the dues to the Society, and to advise the Treasurer in regard to the same.

Drs. James Jackson, Joseph Kittredge, Thomas Bucklin, Stephen Bachelder, Joseph H. Flint, Henry H. Childs, Nathaniel Miller, Hector Orr, Alexander Read and Joseph Sampson were chosen.

Voted, To dissolve the meeting.

Attest, JOHN HOMANS, *Recording Secretary.*

The Fellows of the Society then proceeded to Faneuil Hall, and dined together, to the number of two hundred and thirty-eight.

Proceedings of the Counsellors.

OCTOBER MEETING, 1837.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl street, on Wednesday, October 4th, at 11 o'clock, A. M.

The Records of the last meeting were read.

The Corresponding Secretary read a Report from the Censors of the Second Medical District.

Voted, To proceed to the election of Fellows and Honorary Members.

Luther V. Bell, M. D., was elected a Fellow.

The ballot was then severally taken for Charles Hastings, M. D., of Worcester, England, Thomas Minor, M. D., of Middletown, Ct., Usher Parsons, M. D., of Providence, R. I., who had been regularly nominated as candidates for Honorary Membership, and they were elected.

Voted, To dissolve the meeting.

Attest, JOHN HOMANS, *Recording Secretary.*

FEBRUARY MEETING, 1838.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room in Pearl street, on Wednesday, February 7, at 11 o'clock, A. M.

The Records of the last meeting were read.

The Corresponding Secretary read a letter from the Secretary of the Worcester District Medical Society, communicating the proceedings of an adjourned meeting, and a list of the officers chosen for the current year; and also the following extracts from the records of an adjourned meeting of said District Society, held October 4, 1837, viz.:

"*Voted*, That the Counsellors of this District be respectfully requested to call the attention of the Council of the State Medical Society, to the expediency of recommending to the State Society the repeal of the 39th and 56th By-Laws of said Society."

Voted, To refer this communication to a Committee, consisting of Drs. James Jackson, George Willard and Jno. O. Green, who subsequently presented the following report.

The Committee appointed, by the Counsellors of the Massachusetts Medical Society, at their present meeting, to consider the application from the Worcester District Medical Society respecting the 39th and 56th By-Laws, having considered the subject, submit the following report:

First, the provision in the 39th By-Law, respecting the fee, appears to the Committee perfectly reasonable; but, on the other hand, it does not appear to them important; and on the score of expediency they recommend the repeal of this provision.

Second, as the 56th By-Law was adopted in consequence of the experience of the Fellows, in some parts of the country, that such a law was needful, and as it appears to the Committee perfectly and highly reasonable, they recommend that it be not repealed nor suspended.

If the Counsellors agree in the opinions expressed in this Report, the following vote will be necessary, viz.:

Voted, That the Counsellors recommend to the Society at their next annual meeting, that the 36th By-Law be amended, by inserting after the words "in every case," the following, "except in the cases described in the 39th By-law;" and that the 39th By-Law be amended by omitting the words,

"after the payment of the fee as prescribed in the 36th By-Law."

All which is respectfully submitted,

JAMES JACKSON, *Chairman.*

By order of the Committee.

Boston, Feb. 7, 1838.

Voted, To accept the Report; and the vote was accordingly adopted.

Voted, To proceed to the election of Honorary Members and Fellows.

Amos Twitchell, M. D., of Keene, N. H., was elected an Honorary Member.

Timothy Kinnister, M. D., of Haverhill, and D. H. S. C. Smith, M. D., of Sutton, were elected Fellows.

Drs. Wm. J. Walker and Woodbridge Strong were appointed a Committee to examine the Treasurer's accounts.

Drs. Samuel Morrill and George W. Otis were appointed a Committee to examine the library and cabinet.

Several resolutions, relating to a general national convention of scientific men in the United States, at specified seasons, for the interchange of opinions, &c., were offered.

Voted, To refer said Resolutions to a Committee of five, to report thereon at the next stated meeting of the Counsellors.

Drs. J. V. C. Smith, Jacob Bigelow, George Hayward, Rufus Wyman and Enoch Hale were appointed said Committee.

Voted, That a Committee be appointed to attend to the subject of procuring a modification of the laws relating to Small Pox.

Drs. George Hayward, J. V. C. Smith, Enoch Hale, Z. B. Adams, Rufus Wyman and W. J. Walker were appointed said Committee.

Voted, That this meeting be dissolved.

Attest, JOHN HOMANS, *Recording Secretary.*

MAY MEETING, 1838.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room in Pearl street, May 31st, at 10 o'clock, A. M.

The Records of the last meeting were read.

Voted, To proceed to the election of officers for the ensuing year.

Drs. G. W. Otis, Jr., Boston, J. C. Dalton, Lowell, J. S. Butler, Worcester, were appointed Scrutineers.

The following gentlemen were elected to the several offices, viz.:

George C. Shattuck, M. D., *President.*
Nathaniel Miller, M. D., *Vice President.*
John Homans, M. D., *Corresponding Secretary.*
Solomon D. Townsend, M. D., *Recording Secretary.*
Walter Channing, M. D., *Treasurer.*
George W. Otis, Jr., M. D., *Librarian.*

CENSORS,

For the First Medical District, and for the Society at large.

Enoch Hale, A. L. Peirson, John Ware, Edward Reynolds, Jr., Woodbridge Strong.

For the Second Medical District.

John Green, Benj. F. Heywood, Charles W. Wilder, Benj. Pond, William Workman.

For the Third Medical District.

Stephen W. Williams, Elisha Mather, Atherton Clark, Bela B. Jones, David Bemis.

For the Fourth Medical District.

Henry H. Childs, Wm. H. Tyler, Alfred Perry, Asa G. Welch, Charles Worthington.

Committee on Publications.

Enoch Hale, John Ware, John Homans.

Committee on Resignations.

Walter Channing, Zabdiel B. Adams, John Jeffries.

Enoch Hale, M. D., was chosen to deliver the next annual discourse.

The reports of the Treasurer and of the Auditing Committee were then read and accepted.

Voted, That the Treasurer be authorized to borrow, on the credit of the Society, a sum not exceeding four hundred dollars, for the current expenses of the Society, should the state of the Treasury make a loan necessary.

The Committee on Resignations reported, that the application of Ephraim Stone of Harvard, to resign his fellowship, be granted, which was accepted.

Dr. J. V. C. Smith, Chairman of the Committee to whom was referred the consideration of the propriety of opening a correspondence with other scientific associations in relation to the expediency of organizing a National Society, reported:

That however desirable may be the progress of science and the good fellowship of the learned of this country, yet it appears to this Committee that the objects for which the Massachusetts Medical Society was incorporated, do not require the action of that body on the subject.

Voted, That the report be accepted.

Dr. Jackson, Chairman of the Committee to propose a plan for collecting the outstanding dues of the Society, reported;

1. That there be appointed in each department one or more Counsellors as agents, who shall be authorized to inquire into the circumstances of all such Fellows as are indebted to the Society the amount of nine dollars respectively, and that the said agents shall report to the Counsellors the cases of all such as would be greatly incommoded by the payment of their dues, and that for this purpose the Treasurer give information to each such agent, of the Fellows in his vicinity who are delinquent to the amount above stated.

2. That the Treasurer be authorized to print such circular letters as he may find necessary to obtain payment of arrearages due to this Society.

Voted, That the report be accepted.

The following persons were then appointed agents.

Department No. 1. Dr. Z. B. Adams; 2. Jeremiah Spofford; 3. John C. Dalton; 4. Stephen Bachelder; 5. Joseph H. Flint; 6. Wm. H. Tyler; 7. Jeremy Stimpson; 8. Paul L. Nichols; 9. Alexander Reed; 10. Joseph Sampson.

Dr. Hayward, Chairman of the Committee appointed to procure a modification of the laws relating to Small Pox, presented the following Report.

The Committee appointed at the stated meeting of the Counsellors in February last, to procure a modification of the laws relating to Small Pox, ask leave to report:

That they have attended to the subject, and submit herewith an attested copy of an act of the Legislature which was passed at the last session. This act repeals all the provisions in the Revised Statutes in regard to Small Pox, by which municipal authorities heretofore had power to remove or insulate persons affected with this disease, which prohibited the inoculation for it, and which subjected housekeepers and physicians to a penalty for not informing of cases that came to their knowledge. It is believed that this act was passed with great unanimity in both branches of the Legislature, and the enlightened exertions of two Fellows of our Society who were members of the General Court, and were on the Committee to whom the subject was referred, and one of whom wrote the Report, contributed essentially to this desirable result. This Report, together with one that was made the last year, is herewith submitted. It seems to your Committee that this subject is now placed on a proper footing, and it remains only for our fellow-citizens to avail themselves of the protection which vaccination offers, to enjoy a much greater degree of security than they have hitherto done from the ravages of Small Pox; which is respectfully submitted by

(*Signed,*) RUFUS WYMAN,
GEORGE HAYWARD,
ENOCH HALE,
WILLIAM J. WALKER,
J. V. C. SMITH.

Voted, To accept the Report.

Voted, To proceed to ballot for Fellows of the Society.

The following gentlemen were elected; Drs. Alphonso Brooks, Princeton; James M. Smith, Westfield; Delano Pierce, Grafton; Robert Capen, Plymouth.

Placido Portal, M. D., of Palermo, Sicily, was elected an Honorary Member.

Voted, That the thanks of the Society be presented, by the Corresponding Secretary, to the author of the book on Lithotrity presented by him to the Society.

Voted, That a Committee be appointed to consider the expediency of providing more convenient rooms for the accommodation of the Society, with authority to engage and furnish the same as they deem it expedient.

Drs. Ware, Hale and Homans were appointed the Committee.

Voted, That the thanks of the Counsellors be presented to Dr. Hale for his long, able, and faithful services as Corresponding Secretary.

Voted, That the thanks of the Counsellors be presented to Dr. Osgood for his faithful and useful services as Librarian.

Voted, To dissolve the meeting.

S. D. TOWNSEND, *Recording Secretary.*

Dr. Ephraim Stone of Harvard has had leave to resign Fellowship.

The following gentlemen have been elected Honorary Members of the Society during the year, viz.:

Thomas Miner, M. D., Middletown, Ct.; Usher Parsons, M. D., Providence, R. I.; Charles Hastings, M. D., Worcester, Eng.; Amos Twitchell, M. D., Keene, N. H.; Placido Portal, M. D., Palermo, Sicily.

The following gentlemen have become Fellows of the Society, since the last publication.

By acceptance of Fellowship after Election.—Snell Babbitt, Adams; George Hill, North Adams; John L. Barker, Adams; Henry L. Sabin, Williamstown; Lewis Wheeler, Pittsfield;

Thomas Miner, West Stockbridge; Dudley Leavitt, West Stockbridge; Benjamin F. Kittredge, Hinsdale; Vassal White, Stockbridge (Curtisville); Millen Sabin, Tyringham; Corridon Guiteau, Lee; Joseph Prescott, Northampton; Luther V. Bell, Charlestown; D. H. S. C. Smith, Sutton; Alphonso Brooks, Princeton; Delano Pierce, Grafton; Robert Capen, Plymouth.

By signing the By-Laws in Course.—Nathan S. Babbitt, Adams; Charles F. Barnard, Dorchester; Moore R. Fletcher, Boston; John H. Dix, Boston; John A. Stevens, Charlestown; Ebenezer S. Phelps, Middleton; Benjamin Haskell, Boston; Levi Gould, Wilmington; Chandler Smith, Worcester; Samuel A. Toothaker, Cambridgeport; Henry Wheatland, Salem; Hanover Dickey, Jr.,* Lowell; George Atwood, Provincetown; Horace Dupee, Jr., Boston; Morrill Wyman, Cambridge; Stephen Salisbury, Boston; Allen C. Fay, Milford; Reuben Spalding, Haverhill; Charles E. Ware, Boston; Richard S. Young, Boston; William P. Richardson, Salem; Benjamin E. Cotting, Boston; Hiram B. Tebbets,* Boston; Jonas H. Lane, Boston; Alexander Poole, Dennis; Levi Hubbard, Medfield; Josiah Lamson, Essex; Jonas Underwood, Andover; Oliver Everett, Sherburne; Henry Ferre, Dalton; James Fiske, Milford; Isaac Palmer, Boston; Erastus D. Miller, Franklin; F. G. F. Miville De Chêne, Springfield; Albert T. Wheelock,* Roxbury; Gurdon R. Parkhurst, Salem; Abel B. Adams, Bedford; Madison Fletcher, Pittsfield; George Hoyt, Athol; Bradford L. Wales, Randolph; Joshua Tucker, Boston; Joseph C. Bachelder, Topsfield; Charles H. Wheelwright, Boston; Gideon F. Barstow, Salem; Simeon Tucker, Jr., Stoughton; William Gallup, Concord; Gilman Kimball, Lowell; Joseph H. Dorr, Boston; Adolphus Stone, Shrewsbury; Thomas K. Thomas, Boston; Solomon Barrett, Wendell; Hiram Parker, Lowell; Ephraim Lovell, Mansfield; Ezekiel Wood, Douglas; Samuel Taylor, Petersham; Titus T. Wells, New Bedford; William R. Wells, New Bedford; Lyman B. Larkin, Wrentham.

---

* Removed out of the State.

APPENDIX FOR 1839.

PROCEEDINGS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ANNUAL MEETING.

Boston, May 29, 1839.

THE Annual Meeting of the MASSACHUSETTS MEDICAL SOCIETY was held May 29th, at the Temple, Tremont street, at 10 o'clock, A. M.

The records of the last meeting of the Society, and of the several meetings of the Counsellors during the past year, were read.

Voted, To appoint a Committee to consider the propriety of apportioning the Counsellors according to the number of physicians in each department.

Drs. Walker, Peirson, Wyman, Bartlett of Lowell, and Wilder of Leominster, were chosen the Committee.

Voted, To proceed to the election of Counsellors.

The following gentlemen were elected in the several departments:

First Department. SUFFOLK.—Drs. James Jackson, Benjamin Shurtleff, John C. Warren, John Randall, George C. Shattuck, Walter Channing, Jacob Bigelow, George Hayward, Enoch Hale, Solomon D. Townsend, John Ware, Zabdiel B. Adams, David Osgood, Edward Reynolds, Jr., John Homans, Woodbridge Strong, John Jeffries, George B. Doane, Winslow Lewis, Jr., George W. Otis, Jr., Samuel Morrill, Jerome V. C. Smith.

Second Department. ESSEX.—Drs. Joseph Kittredge,

Jeremiah Spofford, Abel L. Peirson, Andrew Nichols, Edward L. Coffin, Samuel Johnson, Richard S. Spofford, Calvin Briggs, Dean Robinson, Jonathan G. Johnson, Edward A. Holyoke, Wyatt C. Boyden, Rufus Longley, George Choate, George Osborn, Ebenezer Hunt, Charles O. Barker, William Prescott, Joseph Reynolds.

Third Department. MIDDLESEX.—Drs. Thomas Bucklin, John Walton, Abraham R. Thompson, Timothy Wellington, Zadok Howe, William J. Walker, John C. Dalton, Josiah Bartlett, Daniel Swan, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker, Nehemiah Cutter.

Fourth Department. WORCESTER.—Drs. Stephen Bachelder, John Green, Edward Flint, Benjamin F. Heywood, Charles W. Wilder, Amos Parker, George Willard, John Starkweather, John G. Metcalf, Pierson T. Kendall, John S. Butler, Joseph Stone.

Fifth Department. HAMPSHIRE, &c.—Drs. Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Eli Hall, Elisha Mather, Bela B. Jones, David Bemis, Lemuel W. Belden.

Sixth Department. BERKSHIRE.—Drs. Henry H. Childs, William H. Tyler, Asa G. Welch, Royal Fowler, Robert Worthington, Hubbard Bartlett.

Seventh Department. NORFOLK.—Drs. Amos Holbrook, Nathaniel Miller, John Bartlett, Samuel Bugbee, Robert Thaxter, Jeremy Stimpson, Ebenezer Alden, Noah Fifield, James Hewins, Charles Wild.

Eighth Department. PLYMOUTH.—Drs. Hector Orr, Nathan Hayward, Ezekiel Thaxter, Paul L. Nichols, Noah Whitman, Ezra Stevenson.

Ninth Department. BRISTOL.—Drs. Alexander Read, William C. Whittredge, Andrew Mackie, Caleb Swan, Menzies R. Randall, William A. Gordon, Paul Spooner, Samuel Sawyer.

Tenth Department. BARNSTABLE, &c.—Drs. Joseph Sampson, Aaron Cornish, Henry Tuck, Samuel Swift, Elisha P. Fearing, Leroy M. Yale.

The Treasurer submitted his annual reports.

From that of Receipts and Expenditures, it appeared, that the balance on hand last year was $199 09

Cash received of Fellows at annual meeting,		$801	
" "	Secretary of Censors, 1st District, - - -	70	
" "	For Assessments, sundry times, - - -	268 25	
Cash borrowed,	- - - - -	150	
Cash received of	Treasurer of Worcester District, - - -	54	
" "	Treasurer of Essex South,	68	
" "	From anonymous donor,	200	
			$1810 34
The expenditures during the year were	-		1579 02
Leaving a balance in the Treasury of	-		$231 32

From the Report on the Permanent Fund, it appears, that the whole is invested in the Massachusetts Hospital Life Insurance Company, in three policies, and, with interest to January 1, 1839, amounts to $6394 67.

The following Report was then read.

The Committee on the Treasurer's accounts, beg leave to report, that they have attended to the duty assigned them; that the account of the Permanent Fund, as well as the account current for the past year, are accurately cast and duly vouched for; that the amount of the Permanent Fund is $6394 67, and that the balance of the account current in the Treasury is $231 32,—subject to a demand of $150, and interest from October 12, 1838.

(*Signed,*) WILLIAM J. WALKER,
WOODBRIDGE STRONG.

Boston, May 29, 1839.

Voted, To accept the Reports of the Treasurer and that of the Auditing Committee.

The Report of the Committee on the Library and Cabinet was then read and accepted.

Dr. Belden, of Springfield, offered a resolution for the appointment of delegates from the several Medical Districts to take into consideration the expediency of altering the Constitution and By-Laws of the Society. Whereupon it was

Voted, That a Committee be appointed to consider the proposition brought in by Dr. Belden, and report to the Counsellors.

Drs. Peirson, Spofford, and Belden, were appointed the Committee.

The Committee on Publications made the following report, which was accepted:

The Committee on Publications respectfully report, that they were unable to procure for distribution at the present annual meeting, a further portion of Copland's Medical Dictionary, except at a rate much more expensive than the previous volumes of that work. And as they believe there is a prospect that in another year it may probably be continued on much more favorable terms, the Committee have thought it best to procure for the Society for the present year, 500 copies of Green on Diseases of the Skin.

Which is respectfully submitted,

ENOCH HALE,
JOHN WARE,
JOHN HOMANS,
} *Committee on Publications.*

Boston, May 29, 1839.

On recommendation of the Counsellors, it was

Voted, To amend the 2d Section of the 53d By-Law, by adding after the word "transaction," the words "and shall transmit to the applicant a copy of the By-Laws."

The Corresponding Secretary read a letter from the Medical Society of New York, which was referred to the Counsellors.

At 1 o'clock, Dr. Hale read a discourse on the Typhoid Fever of New England.

Voted, That the thanks of the Society be presented to Dr. Hale for his learned, ingenious and sound discourse.

On motion of Dr. Samuel Shurtleff, it was

Voted, That a Committee be appointed to investigate charges brought against him for recommending certain secret medicines.

Drs. Strong, Bowditch, Wild, Ware and Walker, were appointed the Committee, to report to the Counsellors.

Communications were read from the Secretaries of the Boston Society for Medical Improvement, and of the Boston Natural History Society, inviting the Fellows to visit their respective Cabinets, at 4 o'clock in the afternoon.

The Fellows of the Society then proceeded, after the meeting was adjourned, to Faneuil Hall, and dined together, to the number of two hundred and fifty-four.

Attest, S. D. TOWNSEND, *Recording Secretary*.

Proceedings of the Counsellors.

OCTOBER MEETING, 1838.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, October 3, 1838, at 11 o'clock, A. M.

The Records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who have been admitted Fellows of the Society.

Voted, That a Committee be appointed to take into consideration the By-Law relating to the election of distant members.

Drs. Hale, Peirson and Homans, were appointed the Committee.

Dr. Jackson, Chairman of the Committee on collecting the

outstanding dues of the Society, reported progress, and asked leave to sit again, which was granted.

The Committee on Resignations read letters from Drs. T. W. Harris and William H. Tyler, requesting leave to resign their fellowship, which was granted.

On motion of Dr. Jackson, the vacancy in the Committee, occasioned by the resignation of Dr. Tyler, was filled by the election of Dr. Perry of Stockbridge.

The Recording Secretary read a letter from Dr. Alexander Read and others, making an application for a Southern District Medical Society, to hold its meetings in New Bedford.

Voted, To refer the application to a Committee of three.

Drs. Hale, Homans and Townsend were chosen.

Voted, That the Committee on Publications be authorized to issue a 9th Volume of the Medical Library of Practical Medicine, to be distributed to the Fellows at the next annual meeting, provided the expense do not exceed six hundred dollars.

Voted, To proceed to the election of Fellows and Honorary members.

The ballot was then taken for Eli Ives, M. D., of New Haven, and George McClennan, M. D., of Philadelphia, they having been regularly nominated as candidates for Honorary Membership, and they were severally elected.

FEBRUARY MEETING, 1839.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, February 6, 1839, at 11 o'clock, A. M.

The Chairman of the Committee on outstanding dues reported progress, and was instructed to prepare a report for the next meeting of the Counsellors.

Voted, That the Treasurer use his discretion in making abatements in collecting the outstanding dues of the Society.

Drs. William J. Walker and Woodbridge Strong, were appointed a Committee to examine the Treasurer's accounts.

Drs. Samuel Morrill and Anson Hooker, were chosen a Committee to examine the Library.

Voted, To proceed to the election of Fellows of the Society.

Dr. Stephen K. Wardwell, of Hardwick, was elected a Fellow.

The Committee to whom was referred the application of Dr. Alexander Read and others, for a Charter for a District Medical Society, reported,

That the Act of Incorporation of this Society, as well as the By-Laws, provides that every Fellow of this Society, residing within the limits of any District, shall be a member of the District Society. It seemed to the Committee important, therefore, that it should be distinctly stated, that at least a majority of the Fellows, who would be included in the proposed District, are in favor of being thus incorporated. As this was not stated in the application referred to them, the Committee wrote to Dr. Read, on the 17th of October last, requesting further information on this point; but they have received no answer to their letter. If the requisite information should be furnished at the present meeting of the Counsellors, as the Committee hope will be the case, they recommend that a charter be granted according to the terms of the application.

(*Signed,*) ENOCH HALE, *for the Committee.*

Voted, That the report lie on the table.

Dr. Hale, from the Committee appointed to take into consideration the By-Law relative to the admission of distant members, presented the report of the Committee, which recommended the adoption of the following resolution:

Resolved, That it be recommended to the Society at the next annual meeting, in May, to amend the second Section of the 53d By-Law, by adding after the word "transaction," the words "and shall transmit to the applicant a copy of the By-Laws."

The report was accepted, and the resolution adopted.

Voted, That Drs. Putnam, Holyoke, and Smith, be a Committee to collect Cow Pox matter for distribution among the fellows at the next annual meeting, and that the Treasurer pay the expense, not exceeding twenty dollars.

Voted, That a Committee be appointed to investigate charges of gross immorality made against Dr. William Graves, of Lowell, a Fellow of the Society, and to report at an adjourned meeting of the Counsellors.

Drs. Wyman, Wm. Gordon, Willard, Alden, and Osgood, were appointed the Committee.

Adjourned to the first Wednesday in April.

SPECIAL MEETING—MARCH 18, 1839.

A special meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, March 18, 1839, at 11 o'clock, A. M.

The President stated that the meeting was called to consider what measures should be taken in consequence of the petition of Dr. John S. Bartlett, now before the Legislature.

The petition was then read, together with the summons to the president to appear before the Legislature and answer to the charges made against the Society.

After a full discussion of the subject, it was

Voted, That a Committee of six be appointed with instructions and authority to appear before the House of Representatives, in behalf of the Society, to make a defence of the Society and of its proceedings, and do whatever may be necessary to answer or rebut the charges made against the Society or any of its Fellows in the memorial of Dr. John S. Bartlett. And the same Committee shall be authorized to obtain the advice and assistance of some legal counsellor in the conduct of the defence committed to them.

Drs. Jackson, Shattuck, Wyman, Homans, Townsend and Peirson, were appointed the Committee.

Voted, That the allegations made by Dr. John S. Bartlett, in his petition to the Legislature, published in the Morning Post, relating to remarks said to have been made by Dr. A. L. Peirson, before the Medical Society, are entirely without foundation.

Voted, That the meeting be dissolved.

ADJOURNED MEETING—APRIL 3, 1839.

An adjourned meeting of the Massachusetts Medical Society was held at the Society's Room, in Pearl street, on Wednesday, April 3, 1839, at 11 o'clock, A. M.

The records of the last stated meeting were read.

Dr. Wyman, Chairman of the Committee appointed at the last stated meeting to investigate charges of gross immorality made against Dr. William Graves, of Lowell, a Fellow of this Society, presented a report which was amended and accepted as follows:

A meeting of your Committee was appointed to be held at Boston, February 27, 1839, to investigate said charges, of which said Dr. Graves was notified by letter to him directed, and deposited in the Boston Post Office, February 9th.

That thereafter, February 22d, said Graves delivered to the Recording Secretary his license as a practitioner in medicine, and also his diploma and resignation as a Fellow, and delivered to your Committee a copy of his resignation subscribed by himself.

That your Committee met at the time and place appointed, and received documents, printed and written, relative to the professional conduct of Dr. Graves, and that he did not appear at said meeting, which documents are herewith submitted.

Whereupon your Committee recommend that the following vote be passed by the Counsellors:

Whereas charges of gross immorality have been made to

the Counsellors of the Massachusetts Medical Society against Dr. William Graves of Lowell, a Fellow of this Society; and whereas said Graves did not attend a meeting of the Committee appointed by the Counsellors to investigate said charges, held at Boston, February 27, 1839, of which meeting he had due notice, but deposited with the Recording Secretary his license as a practitioner in medicine, and also his diploma and resignation as a Fellow,

Voted, That Dr. William Graves, of Lowell, a Fellow of the Massachusetts Medical Society, "has withdrawn himself from the Society, without the permission of the Counsellors," and is thereby deprived of all the honors and privileges of the Society, and is hereafter to be deemed "by the Fellows of the Society an irregular practitioner."

Respectfully submitted by

(*Signed*,) RUFUS WYMAN,
WILLIAM GORDON,
DAVID OSGOOD,
EBENEZER ALDEN.

Boston, February 27, 1839.

Dr. Hale, from the Committee on the application of Alexander Read and others, for a District Medical Society, presented the following report, which was read and accepted:

The Committee to whom was referred the application of Alexander Read, M. D., and others, for a District Medical Society, ask leave to report further: That since the stated meeting of the Counsellors they have received from Dr. Read the desired information, that a great majority of the Fellows of the Society, interested in the proposed District Society, have expressed their approbation thereof, and no one has expressed an opposite opinion. The Committee therefore respectfully recommend the adoption of the following resolution:

Resolved, That a charter be issued to Alexander Read, Paul Spooner, Samuel Sawyer, Julius S. Mayhew, Andrew Mackie and William C. Whittredge, establishing a District

Medical Society, to consist of the Fellows of the Massachusetts Medical Society, residing for the time being in the towns of New Bedford, Fall River, Taunton, Freetown, Fairhaven, Dartmouth and Westport, of Bristol County; Middleborough, Rochester and Wareham, of Plymouth County; Chilmark, Tisbury and Edgarton, of Duke's; and Nantucket,—to be called *The Southern District Medical Society;* and the place of meeting to be New Bedford.

Which is respectfully submitted,

ENOCH HALE,
S. D. TOWNSEND,
JOHN HOMANS,
} *Committee.*

Boston, February 22, 1839.

MAY MEETING, 1839.

A stated meeting of the Counsellors of the Masachusetts Medical Society was held at the Society's Room, Pearl street, May 30, 1839, at 10 o'clock, A. M.

The records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting of the Counsellors.

Voted, To proceed to the choice of officers for the ensuing year.

Drs. Otis and Dalton, were appointed scrutineers.

The following gentlemen were elected to the several offices:

GEORGE C. SHATTUCK, M. D., *President.*
NATHANIEL MILLER, M. D., *Vice President.*
JOHN HOMANS, M. D., *Corresponding Secretary.*
SOLOMON D. TOWNSEND, M. D., *Recording Secretary.*
WALTER CHANNING, M. D., *Treasurer.*
GEORGE W. OTIS, JR., M. D., *Librarian.*

CENSORS,

FOR THE FIRST MEDICAL DISTRICT, AND FOR THE SOCIETY AT LARGE.

A. L. Peirson, Edward Reynolds, Jr., John Ware, Woodbridge Strong, John Jeffries.

FOR THE SECOND MEDICAL DISTRICT.

John Green, Benjamin F. Heywood, Charles W. Wilder, Benjamin Pond, William Workman.

FOR THE THIRD MEDICAL DISTRICT.

Stephen W. Williams, Elisha Mather, Bela B. Jones, David Bemis, Mathew B. Baker.

FOR THE FOURTH MEDICAL DISTRICT.

Henry H. Childs, William H. Tyler, Alfred Perry, Asa G. Welch, Charles Worthington.

COMMITTEE ON PUBLICATIONS.

Enoch Hale, John Ware, John Homans.

COMMITTEE ON RESIGNATIONS.

Walter Channing, Zabdiel B. Adams, John Jeffries.

Abel L. Peirson, M. D., of Salem, was chosen to deliver the next annual discourse.

The annual report of the Censors of the First District was read and accepted.

The report of the Treasurer and that of the Auditing Committee were then read and accepted.

Voted, That the Corresponding and Recording Secretaries be appointed to advise with the Treasurer in the collection of the outstanding dues of the Society, and that the Treasurer be authorized to borrow $400, if the state of the treasury should require it.

The Committee on Resignations reported an application to resign fellowship from Dr. S. O. Richardson, of South Reading.

Voted, That a Committee be appointed to take into consideration the application of Dr. Richardson, and the whole subject of resignation of fellowship.

Drs. Howe of Billerica, Bartlett of Concord, Cutter of Pepperell, and Choate of Salem, were appointed the Committee.

Voted, That the District Societies be allowed to retain for their own use any money received by them from the sale of the Volumes of the Library of Practical Medicine, to Fellows residing within their limits.

The Committee appointed at a special meeting of the Counsellors, on the 18th of March last, to appear before the House of Representatives in behalf of the Society and of its proceedings, and to do whatever may be necessary to answer or rebut the charges made against the Society or any of its Fellows, in the memorial of Dr. John S. Bartlett, presented the following report of their proceedings accompanied with a printed report of the evidence in the case, published by order of the House of Representatives.

The Committee appointed by the Counsellors on the 18th day of March, "to appear before the House of Representatives, in behalf of the Society and of its proceedings, and to do whatever may be necessary to answer or rebut the charges made against the Society or any of its Fellows, in the memorial of Dr. John S. Bartlett," beg leave to make a report of their proceedings.

On the first examination of their duties, the Committee perceived the necessity of employing legal counsel. Although the course to be pursued might seem perfectly plain in defending the Society against groundless and absurd charges, yet, as the present case was a new one, the future welfare of the Society might be hazarded by establishing some injurious precedent, or by admitting to an undue extent the jurisdiction of the honorable body before which we were called to appear, as well as by objecting to that jurisdiction in terms which might not be deemed to correspond with the respect justly due to that body.

Your Committee, therefore, engaged as counsel, the Hon. Peleg Sprague, who, owing to engagements previously formed, was obliged to relinquish the case after attending the first meeting, and drawing up a respectful protest against the jurisdiction of the tribunal, before which we were called to appear. This protest was subsequently presented, and makes part of the printed report of the legislative committee, herewith presented. The management of the case was then transferred to the Hon. Franklin Dexter.

It is due to these distinguished gentlemen to say, that they both entered zealously into the cause of the Society.

Mr. Dexter's task was extremely laborious. He was called to attend several very long evening sessions, and to be engaged in proceedings more tedious and unpleasant than those usually encountered in a court of law. One advantage, however, was secured by submitting to this annoyance. Our counsel possessed himself of the history of the Society, its character and labors, and discovered how groundless were the charges brought against it by those who were desirous to misrepresent and traduce it.

The Committee of the House of Representatives gave to the parties seven hearings, of between three and four hours each, besides three meetings of shorter duration for consultation and preliminary arrangements. Of the seven formal sessions, five were entirely devoted to the petitioner, leaving only two to be occupied by your Committee, the last of these being on the evening preceding the rising of the General Court.

The petitioner was first examined as a witness. He admitted that the doings of the Society towards him had been characterized by good faith and courtesy, and that his expulsion from the Society was the inevitable consequence of a just adherence to its own by-laws. Notwithstanding this admission, he contended that he was wrongfully expelled, because the offence charged upon him was committed in his character of a newspaper editor, and not as a physician or surgeon; that in recommending to public confidence Williams,

called the oculist, he was actuated by benevolent principles; that this Williams was a surgeon of high standing and possessed of skill in treating diseases of the eyes, far greater than that of any of the regular faculty,—that the degree of Doctor of Medicine, which the petitioner had received from Harvard University, conferred upon him the right of consulting with other physicians, and that the law of the Society authorizing expulsion, which deprived him of the right of consulting with its fellows, was illegal and unconstitutional; that the law prohibiting consultations with irregular practitioners is inhuman and hurtful to the community; that this inhumanity was admitted and approved of by the Society, at the public meeting at which he was expelled, as appeared by the statements made on that occasion by Dr. A. L. Peirson, and tacitly approved by the Society; that the Massachusetts Medical Society is founded, sustained and managed upon wrong principles, its affairs administered by a few, for their own selfish advancement, to the injury of the profession and the public, and that it contains many very ignorant and wicked men, quite as worthy to be called quacks, as those who are commonly so designated; and that, generally, neither the license of the Society, nor the diploma from any medical school, is to be regarded as evidence of professional knowledge.

He likewise maintained that his expulsion from the Society was highly detrimental to his business and prospects.

The evidence offered in support of these positions was trivial and irrelevant. It consisted of certain documents, principally relating to the standing of Williams, and the petitioner's assertions of fact and opinion, under oath, with the testimony, also under oath, as to facts and opinions, principally the latter, by two Counsellors of the Society. A principal object with the petitioner being to show the alleged cruelty of the 8th by-law, restricting consultations. A letter from Dr. Waterhouse, containing his opinions against the Society generally, and specially with regard to these restrictions, was also offered in evidence, and although not received by the Committee of the House of Representatives, was, in the

commendable liberality which characterized their doings, ordered to be printed in an appendix to their report. The counsel for the petitioner here stated that they had brought forward all the evidence they intended to offer, except such as might be necessary to rebut the testimony adduced by the Society.

In their very brief opportunity to reply to these charges, your Committee showed that the charter of the Society, in express terms, gave the right to expel any member on sufficient cause; that Dr. Bartlett was rightfully expelled, upon the facts admitted by himself; that the diploma of Harvard University, in conferring upon him the privilege "de medicinâ *consultandi*," never contemplated creating an obligation in other persons to consult with him; that his connection with Williams was probably of a selfish and not of a benevolent nature, and they showed by his own acknowledgement, as well as by other facts, that his recommendation of him was not merely editorial, but professional, and on the grounds of medical knowledge and skill. They adduced evidence to show clearly that Williams was unworthy of trust, and that any educated physician must have discovered the proofs of imposture and deception in witnessing a single interview with his patients; and they offered much more evidence on this point, going to show conclusively, that Dr. Bartlett's connection with Williams constituted a most aggravated infraction of the by-law relating to consultation, but they were stopped by the Legislative Committee, in consequence of want of time. Your Committee also showed that the petitioner had no right to attribute his lack of professional success to his expulsion from the Society, although, if opportunity had permitted their attorney to go into an argument on the subject, they would have stated through him, that an expulsion, like all penalties for breach of law, is designed to operate to the injury of the person expelled,—but that in regard to the individual in this case, no special malice was felt, nor ought any such feeling to be attributed to the Society, nor to any of its Fellows, without distinct proof.

In answer to the general charges and imputations brought against the Society, your Committee showed by the testimony, under oath, of one of its members, who had been connected with the Society ever since its re-organization in 1803, that the Society had been faithful to the two great trusts committed to it by their charter, to wit: 1. To establish "a just discrimination between such as are duly educated and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine, whereby the health and lives of many valuable individuals may be endangered, and perhaps lost to the community;" and, 2. To disseminate practical information among the members of the Society; which they have endeavored to do by original and selected publications, reports upon epidemic diseases, the printing and distribution of standard works in medicine, the formation of district societies, the establishment of libraries, and generally by the promotion of enlightened professional intercourse; by all which means the great end for which the Society was established is more certainly attained, viz., the good of the community generally; and that the 8th by-law, making an important distinction between regular and irregular practitioners, especially contributes to the attainment of this object.

They showed that the benefit of the community at large, and not that of the Society, solely, was the real object of its operations; that the modes of action pursued by it were high-minded and honorable; that the rights and feelings of the petitioner were duly regarded in arraigning him before it, and that the allegation against one of the Fellows of the Society, of expressing sentiments at variance with the laws of humanity and the general good of mankind, was utterly false.

Your Committee, having been permitted to occupy only two evenings, and not the whole of them, in adducing evidence, of which they have now given a sketch, were then arrested in their course by the approaching termination of the session of the General Court. On the day following the

last hearing accorded to them, being the last day of the session, the Committee of the House of Representatives made a report, a printed copy of which accompanies this, and which your Committee request may be received as a part of their report.* It will be seen, that no time was allowed for argument by the counsel on either side. That your Committee may not be misunderstood, they deem it right to add, that the Committee of the House of Representatives showed the utmost patience and impartiality in the examination of the case, and that no blame is to be attributed to them for not having brought the case to a conclusion. But although the Committee of the House of Representatives did not feel themselves authorized or required to give an opinion, yet, it seems probable that the testimony published in their report will so far satisfy all honest and reasonable men, that the Massachusetts Medical Society is not subject to any censure in regard to its conduct towards the petitioner, nor in its course of proceedings generally,—that no further annoyance will be felt by it in consequence of the petition. And your Committee conclude their report, by expressing their confident belief, that the present attempt to deprive the Society of its charter will only serve to show more fully, that it is worthy of public support and encouragement as a useful and well-conducted institution.

Respectfully submitted by

JAMES JACKSON,
GEO. C. SHATTUCK,
JOHN HOMANS,
RUFUS WYMAN,
S. D. TOWNSEND,
A. L. PEIRSON,
} *Committee.*

Boston, May 26, 1839.

Voted, To accept the report.

---

* The report to the House of Representatives, having been already distributed to the Fellows of the Society, is not reprinted in this Appendix.

On motion of Dr. Warren, the following resolution was adopted:

Resolved, That the thanks of the Counsellors be presented to the Committee who have defended the interests of the Society before the Legislature of this Commonwealth, together with an expression of high approbation for their industry, attention and good judgment displayed in the conduct of their business.

The Committee to whom was referred the proposal made at the annual meeting for altering the Constitution of the Society, made the following report:

That the short time they have been enabled to confer together, and to become possessed of the views of the Fellows of the Society who are desirous of so modifying its Constitution, as to secure greater advantages than they now enjoy, to those Fellows residing at a great distance from our place of meeting, has rendered it impossible for your Committee to devise any plan, if any be practicable, to bring about this desirable result.

Your Committee therefore recommend, that the whole subject be referred to a Committee of the Counsellors, with direction to report at their next meeting upon the expediency of recommending to the Society, at their annual meeting, an alteration of the organization of the Society, in conformity to the views presented at the annual meeting of the present year, by a Counsellor from the County of Hampden.

(*Signed*,) ABEL L. PEIRSON,
JEREMIAH SPOFFORD,
LEMUEL W. BELDEN.

Boston, *May* 30, 1839.

Voted, To accept the report, and that this Committee be composed of one Fellow from each county in the State.

A Committee of Nomination was then appointed, consisting of Drs. Jackson, Belden and Hale, who subsequently came in and reported the names of the following gentlemen as

candidates, who were unanimously chosen to compose the Committee:

Berkshire, Dr. Royal Fowler, of Stockbridge; *Hampden*, Dr. Lemuel W. Belden, of Springfield; *Hampshire*, Dr. Elisha Mather, of Northampton; *Franklin*, Dr. Stephen W. Williams, of Deerfield; *Worcester*, Dr. John S. Butler, of Worcester; *Middlesex*, Dr. John C. Dalton, of Lowell; *Essex*, Dr. Jeremiah Spofford, of Bradford; *Suffolk*, Dr. Enoch Hale, of Boston; *Norfolk*, Dr. Ebenezer Alden, of Randolph; *Bristol*, Dr. Alexander Read, of New Bedford; *Plymouth*, Dr. Winslow Warren, of Plymouth; *Barnstable*, Dr. Joseph Sampson, of Brewster; *Duke's County*, Dr. Leroy M. Yale, of Holmes' Hole; *Nantucket*, Dr. Paul Swift, of Nantucket.

Voted, That the Recording Secretary inform each member of the Committee of his appointment,—of the general object of the meeting, and that the expenses of the attendance will be defrayed by the Society, viz., two dollars a day while in session, and the usual expense of travelling by stage or rail-road to the place of meeting.

Voted, That the Committee hold their first meeting on the 10th day of July next, at 10 o'clock, A. M., at Worcester; and that Dr. Butler, of that place, be authorized to provide some place for the meeting, and that the members of the Committee report themselves on their arrival to him.

Voted, That every member of the Committee be requested immediately on the receipt of his notice, to inform the Recording Secretary whether he accepts his appointment; and that if any one declines, the President, with the advice of the two Secretaries, the Treasurer and Librarian, be authorized to appoint some Fellow from the same county in his place.

Voted, That if at any meeting of the Committee, any member of the same be absent, the Committee may fill the vacancy, should they be able so to do, by appointing some Fellow from the county in which the deficiency occurs.

Voted, That the President, Drs. Peirson, Homans and Townsend, be a Committee to consider and report upon the practicability of procuring funds by forming a Joint Stock Company, in the stock of which, the permanent fund of the Society shall be invested, for the purpose of erecting a suitable building for the annual meeting and other purposes of the Society.

A letter from the Medical Society of the State of New York was read, recommending a National Medical Convention; whereupon it was

Voted, To concur in the recommendation therein contained, that delegates be appointed at the next meeting of the Counsellors, and that the Corresponding Secretary be requested to write to the New York Society, stating this concurrence.

Voted, That the Committee on Publications be authorized to publish a revised edition of the By-Laws and Orders, with a corrected list of Fellows of the Society, and a list of Books to be studied.

Voted, That the Committee on Publications be authorized to select and publish a Tenth Volume of the Library of Practical Medicine, provided that the expense do not exceed six hundred dollars, to be distributed to the Fellows of the Society at the next annual meeting, on the same terms as were established for the first volume, by the report accepted February 1, 1831.

Voted, That the Librarian be authorized to sell the 9th Volume of the Library of Practical Medicine to such Fellows as shall hereafter be admitted to the Society, one copy to each, for one dollar.

The Committee appointed at the present meeting to take into consideration the letter of Dr. S. O. Richardson, requesting to be discharged from his fellowship with the Massachusetts Medical Society, submitted the following report:

That whereas the said Richardson having withdrawn from

the Society, and having assigned a reason for so doing which is by no means satisfactory, your Committee recommend that the name of the said S. O. Richardson be stricken from the list of Fellows, and that the Counsellors take no further action on the subject.

Respectfully submitted,

(*Signed,*) ZADOK HOWE, *for the Committee.*

Voted, To accept the report.

Attest, S. D. TOWNSEND, *Recording Secretary.*

The following Fellows have during the year resigned their fellowship, by leave of the Counsellors, and become *retired members:*

Nathaniel Pierce, Ashburnham; Nathaniel Swift, Andover; Samuel Adams, Williams Bradford, and Benjamin F. Wing, Boston; Thaddeus W. Harris, Cambridge; Silas Brown, Wilmington.

Drs. William Graves, Lowell, and Solon O. Richardson, South Reading, have withdrawn from the Society.

The following gentlemen have been elected Honorary Members:

Eli Ives, M. D., New Haven; George McClennan, M. D., Philadelphia.

The following gentlemen have become Fellows of the Society, since the last annual publication:

By Election and acceptance of Fellowship.—Charles McAllister, Lee; Timothy Kinniston, Haverhill; Stephen H. Wardwell, Hardwick.

By Signing the By-Laws in Course.—Edward A. Kittredge, Lynn; Henry J. Martin, Boston; Edward Bradstreet, Newburyport; Benjamin H. West, Nantucket; Asa T. Newhall, Lynn; Nathaniel S. Tucker, Boston; Thomas M. Brewer,

Boston; Clark Blaisdell, Marblehead; Henry P. Phillips, North Adams; James Stone, Jr., Salem; John Osgood Stone, Salem; James Wilde, Duxbury; Henry Lyon, Charlestown; Selden Jennings, Richmond; William W. Cutler, Boston; Willard Adams, Woburn; Isaac G. Braman, Georgetown; William W. Wellington, Cambridge; Azell Parkhurst Ladd, New Bedford; William M. Kimball, Southbridge; Benjamin F. Parker, Roxbury; Christopher C. Yates, Boston; Joseph H. Foster, Boston; Bertrand F. Bugard, Boston; Benoni Guay, Quebec, Lower Canada; Jefferson Pratt, Hopkinton; Samuel R. Gerry, Boston; Benjamin Skelton, Lowell; Isaac White Scribner, Lowell; J. S. Lloyd Whittemore, Scituate; Otis Perham, Lowell; David Wells, Lowell; Lemuel W. Briggs, Jr., Middleboro'; Jeremiah P. Jewett, Lowell; Daniel Clark, ———; Charles Vose Bemis, Medford; Albert C. Eaton, Milford; Elisha Huntington, Lowell; Stephen M. Gale, Lowell; Ebenezer T. Learned, Weymouth; Asahel H. Wildes, Ipswich; Robert T. P. Fiske, Hingham; Daniel Mowe, Lowell; Ward N. Boylston, Princeton; Samuel Parkman, Boston; Charles Cutler, Grafton; Harlin Pillsbury, Lowell; William Grey, Lowell; James W. Ford, Lowell; Theophilus E. Wood, Lowell; Alfred Hitchcock, Ashby; Samuel Richardson, Watertown; Benjamin B. Appleton, Jr., Boston; Charles H. Brown, Ipswich; Nathan French, Malden; William S. Saunders, Sturbridge; Samuel C. Hartwell, Southbridge; Ephraim Buck, Jr., Boston; Elbridge Gerry Wheeler, Hopkinton; John W. Tenney, Webster; C. C. Field, Leominster; George Chandler, Worcester; Oliver H Blood, Worcester.

APPENDIX FOR 1840.

PROCEEDINGS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ANNUAL MEETING.

The Annual Meeting of the Massachusetts Medical Society was held on Wednesday, May 27th, at the Temple, Tremont street, at 10 o'clock, A. M.

The records of the last meeting of the Society, and of the several meetings of the Counsellors, were read.

Voted, To proceed to the election of Counsellors.

Drs. Wilder, of Leominster, Flint, of Boston, Walker, of Charlestown, Bartlett, of Concord, Coffin, of Lynn, Bartlett, of Boston, Sargent, of Worcester, and Nichols, of Kingston, were appointed Scrutineers.

The number of Counsellors was then determined as follows: First department, 22. Second department, 17. Third department, 14. Fourth department, 12. Fifth department, 8. Sixth department, 6. Seventh department, 10. Eighth department, 6. Ninth department, 8. Tenth department, 6.

The Fellows were requested to deposit their votes in the ballot boxes, which were to remain on the table until 12 o'clock, when the votes were to be counted.

The Treasurer submitted his annual reports.

From that of Receipts and Expenses, it appears that the balance on hand last year was $231 32

Cash received at annual meeting, - - -	780
Assessments, at sundry times, - - - -	605 70
Secretary, Censors, 1st District, - - -	20
Gift, from Dr. George Bates, - - - -	40
	1677 02
Expenditures during the year, - - -	1517 02
Leaving a balance in the Treasury of - -	$160 00

From the Report on the Permanent Fund, it appears, that the whole is invested in the Massachusetts Hospital Life Insurance Company, in three policies, and, with interest, amounts to $6746 37.

The following Report was then read.

The Committee appointed to examine the books and accounts of the Treasurer, have attended to that duty, and report, that the books have been regularly kept, according to the usual method, and the accounts correctly vouched; there remains a balance of cash in the Treasury of $160.

(*Signed,*) JOHN JEFFRIES, *Chairman.*

Boston, May 27th, 1840.

Voted, To accept the Reports of the Treasurer and that of the Auditing Committee.

The following Report of the Committee on the Library was read and accepted.

The Committee appointed to examine the Library, have attended to that duty, and report, that they find the Library in good condition, the books well kept, and in their places, or accounted for.

(*Signed,*) WOODBRIDGE STRONG,
EDWARD REYNOLDS.

May 27th, 1840.

Voted, To take up the propositions made by the Counsellors, to amend the By-laws, Rules and Orders.

While they were under consideration, the Scrutineers came in, and reported the choice of the following Counsellors, in the several departments:

First Department. SUFFOLK.—Drs. James Jackson, John C. Warren, George C. Shattuck, Jacob Bigelow, George Hayward, Enoch Hale, Solomon D. Townsend, John Ware, Zabdiel B. Adams, David Osgood, Edward Reynolds, Jr., John Homans, Woodbridge Strong, John Jeffries, George B. Doane, George W. Otis, Jr., Winslow Lewis, Jr., Samuel Morrill, Jerome V. C. Smith, Charles T. Hildreth, D. Humphreys Storer, John Flint.

Second Department. ESSEX.—Drs. Joseph Kittredge, Jeremiah Spofford, Abel L. Peirson, Andrew Nichols, Edward L. Coffin, Samuel Johnson, Richard S. Spofford, Calvin Briggs, Dean Robinson, Jonathan G. Johnson, Rufus Longley, George Choate, George Osborn, Ebenezer Hunt, William Prescott, Charles O. Barker, Joseph Reynolds.

Third Department. MIDDLESEX.—Drs. Thomas Bucklin, Abraham R. Thompson, Timothy Wellington, Zadok Howe, William J. Walker, John C. Dalton, Josiah Bartlett, Daniel Swan, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker, Nehemiah Cutter, J. Stearns Hurd.

Fourth Department. WORCESTER.—Drs. Stephen Batchelder, John Green, Edward Flint, Benjamin F. Heywood, Charles W. Wilder, Amos Parker, George Willard, John Starkweather, John G. Metcalf, Pierson T. Kendall, Joseph Stone, William Workman.

Fifth Department. HAMPSHIRE.—Drs. Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Bela B. Jones, David Bemis, Atherton Clark, Benjamin Barrett, Gardiner Dorrance.

Sixth Department. BERKSHIRE.—Drs. Henry H. Childs, Asa G. Welch, Royal Fowler, Robert Worthington, Vassall White, Snell Babbit.

Seventh Department. NORFOLK.—Drs. Amos Holbrook, Nathaniel Miller, Rufus Wyman, Samuel Bugbee, Robert Thaxter, Jeremy Stimpson, Ebenezer Alden, Noah Fifield, James Hewins, Charles Wild.

Eighth Department. PLYMOUTH.—Drs. Hector Orr, Nathan Hayward, Ezekiel Thaxter, Paul L. Nichols, Noah Whitman, Winslow Warren.

Ninth Department. BRISTOL.—Drs. Alexander Read, William C. Whittredge, Andrew Mackie, Caleb Swan, Menzies R. Randall, Paul Spooner, Samuel Sawyer, William Gordon.

Tenth Department. BARNSTABLE.—Drs. Joseph Sampson, Aaron Cornish, Paul Swift, Elisha P. Fearing, Leroy M. Yale, Henry Tuck.

The consideration of the propositions for the amendment of the By-Laws was suspended at 1 o'clock, by the annual discourse, which was read by Dr. Abel L. Peirson, on the subject of "Fractures."

Voted, That the thanks of the Society be presented to Dr. Peirson for his able and useful discourse.

On motion of Dr. Barrett, of Northampton, it was

Voted, To accept the entire Report of the Counsellors on the amendment of the By-Laws. [See pages 82, 84 and 86.]

Voted, To rescind the fourteenth of the "Orders" of the Society, and to adopt the substitute recommended by the Counsellors.

Voted, That the recommendation of the Counsellors to repeal the first of the "Rules and Orders of the Counsellors" be accepted, and that the substitute recommended by them be adopted.

[For all these amendments, &c., see new edition of By-Laws; also, pages 82, 84 and 86 of this Appendix.]

Voted, To adopt the following resolution of the Counsellors: That all votes, heretofore passed, either by the Society or the Counsellors, designed to have a permanent operation, be, and they hereby are, repealed, except so far as they have been incorporated into the By-Laws or Orders.

Voted, That the above resolution be printed with the next edition of the By-Laws.

The following resolution, offered by Dr. Winslow Lewis, was adopted as amended:

Resolved, That there be chosen, by nomination from the chair, five Fellows, as a Committee, to inquire into and report upon the expediency of altering the By-Laws respecting the election of the officers of the Society, so as to incorporate the following as a substitute, to report at the next annual meeting:

At the annual meeting of the Society, there shall be chosen from among its Fellows, by ballot, a President, Vice President, Corresponding and Recording Secretaries, Treasurer, Librarian and Orator.

This resolution was afterwards, on motion, reconsidered and rejected.

Voted, To dissolve the meeting.

Attest, S. D. TOWNSEND, *Recording Secretary*.

The Fellows of the Society then proceeded to the United States Hotel, and dined together, to the number of two hundred and seventy-one.

Proceedings of the Counsellors.

OCTOBER MEETING, 1839.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl St., October 2d, 1839.

The Records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting.

The Corresponding Secretary read a letter from Dr. Samuel Sawyer, of Fairhaven, informing him of the organization of The Southern District Medical Society.

Dr. Hale, from the Committee appointed at the last meeting of the Counsellors to meet at Worcester to consider the

expediency of altering the Constitution of the Society, presented the following Report; which was ordered to be printed, and distributed to each member of the Society; and to be considered at the next stated meeting of the Counsellors.

MASSACHUSETTS MEDICAL SOCIETY.

The Committee of the Counsellors, consisting of one Fellow of the Society from each county in the Commonwealth, appointed to take into consideration the whole subject of the Constitution and By-Laws of the Society, have attended to the duty assigned them, and respectfully report:

That the Committee met at Worcester, at the time appointed by the Counsellors, July 10, 1839, two members only—Dr. Read, of New Bedford, and Dr. Yale, of Tisbury—being absent, and continued in session till the following day. After a very full and frank discussion of all the questions that presented themselves, under the very comprehensive commission referred to them, the Committee have come to the following results, which they now present to the Counsellors.

The profession of medicine is a liberal and benevolent one. Its objects can be accomplished only by measures which have a favorable bearing upon the welfare of the whole community, no less than upon the personal interests of its members. In like manner, the best interests of the whole profession are so interwoven, that the prosperity of any considerable part necessarily advances the prosperity of the whole. The Medical Society has, and can have, no separate objects or interests, exclusive of those of the whole body of physicians. Whatever elevates the character and influence of the Society, by the increased intelligence, diligence and devotedness of its members, adds to the respectability, and to the power of doing good, of every member of the profession.

Neither are the means, by which the objects of the Society are promoted, of a selfish or exclusive nature. The whole history of the Society shows that it has never cherished any purpose or desire of accumulating peculiar privileges for its

members. In its original Constitution, the Society was limited to seventy members; on whom were conferred all the powers incident to a regulation of professional conduct, and to the examination of candidates and the granting of licenses. After an experience of twenty years, the members became satisfied that the organization of the Society was not well adapted to the production of all the benefits expected from it. They applied to the Legislature,—not for the grant of additional powers or privileges,—but for permission to share with others the privileges already granted to themselves. Authority was not only obtained to elect all physicians of a suitable character throughout the State Fellows of the Society, but provision was made that, in all time to come, every man of good moral character, who should enter the profession after a proper preliminary education, might claim admission to the Society, as a matter of right. The only restriction was, the requirement that candidates should remain with the privileges of licentiates three years, before they could be admitted Fellows. These were the provisions of the Act of 1803, which was passed solely on the application of the Society, and was prepared with great care, under the watchful supervision of an able committee of its members.

After a further experience of nearly another twenty years, it was found that the restriction of the three years' probation produced in the minds of some young men feelings of jealousy and discontent. The Society applied again to the Legislature; and, as before, not for an increase of its privileges, but for an extension of them to others not embraced in its provisions. The Society has never sought for any advantages to its members, which should not be freely enjoyed by every competent physician in the State, who would in any reasonable manner exhibit the evidence of his competency. It has never sought to coerce those who venture upon the high duties and responsibilities of the profession without a competent preparation. On the contrary, when the Legislature compelled them, by their Censors, to determine who should, and who should not, be entitled to certain legal facilities in regard to professional fees, the difficult trust was accepted with reluctance;

and it was in consequence of the opinion expressed distinctly by the Society, and of the efforts of some of its members, that the law was repealed.

In carrying into effect its important objects, the Society has never relied mainly upon the immediate effects of its legislation. It is not so much by the enactments of its laws, as by the high character and honorable conduct of its members, that it seeks to exert its beneficial influences. The annual meetings of the Society have been attended by a large proportion of the Fellows with feelings of lively interest, and have done much to excite a spirit of improvement and harmony. It is obvious, that the advantages of such meetings are by no means limited to those who ordinarily attend them, but are shared, in a very eminent degree, by all. It is only necessary that the meetings should be so constituted as to secure a fair representation of the interests and feelings of the whole, and thus obtain a general confidence and coöperation. This, the Committee believe, is fully accomplished in regard to a very large proportion of the State; and they confidently trust that the modifications, which they are about to propose, will effect the same purpose in regard to the remaining portion.

The Society is too large to enter with facility as a body upon the discussion of medical questions, except in listening to the annual discourse. A library or a cabinet for the whole Society would not diffuse its benefits to those Fellows who reside at a distance from the place of its deposit, equally with those who are near. These objects can best be accomplished by the action of district medical societies. It should be the policy of the Society, therefore, as it ever has been since its reorganization in 1803, to encourage the formation and efficiency of such societies. And the Committee would recommend to the Fellows of the Society, who are not organized into district societies, to take measures to form them, whenever it can advantageously be done; believing that they may do much to extend the usefulness of our institution.

In the practical adaptation of the principles thus expressed, the Committee do not propose any radical change in the

organization or mode of action of the Society. They believe that the great purposes for which the Society was established, or which can with propriety come within its purview, have already been accomplished more effectually than in almost any other kindred institution of which they have any knowledge, in respect to far the greatest part of the profession. But it is said, in behalf of those who reside in the four western counties of the State, that their great distance from the place of meeting precludes them from the enjoyment of many of the advantages possessed by those who are more favorably situated; and that, in consequence, so few of their Fellows attend the meetings, either of the Society or of the Counsellors, that the proceedings do not obtain their sympathy or confidence in a sufficient degree to render either the By-Laws or the recommendations of the Society operative upon them.

To remedy this difficulty, and to acquire for the legitimate actions of the Society the confidence of all its members, the Committee recommend the adoption of a system of modified representation. They do not propose a change of the Constitution to a Society made up of delegates. It is perfectly evident to them, that a very large majority of the Society are altogether indisposed to relinquish the advantages and the satisfaction derived from a personal attendance on the annual meetings. Such an attendance need not be abandoned. But the Committee propose that district societies, whenever they are disposed to do it, shall be authorized to select their own Counsellors, and that absent members, both of the Society and of the Counsellors, shall be permitted to vote by proxy. This will secure to the distant members of the Society an easy and full representation of their views and feelings at the several meetings; while it does not interfere with the right of each Fellow to take his full share in the proceedings. Provision is also made for the election of the whole body of the Counsellors in a manner conformable to the charter, both in regard to such portions of the Society as may not be organized into district societies, and to any deficiency that may exist in respect to the selections of the district societies. The nature of the proposed arrangement will more fully appear from

the amendments herewith submitted to the By-Laws of the Society. This plan does not require an arbitrary organization of the Society into fixed districts, or any interference with the present arrangement of district medical societies, or with such as may be formed hereafter, according to the convenience and feelings of the Fellows in the several parts of the State. It only requires that the number of Counsellors shall be determined according to a fixed ratio of the number of Fellows in the several districts and counties.

It appears to the Committee, by information furnished by some of its members, that the fifty-sixth By-Law has, in some parts of the State, given offence, by taking away the freedom originally intended to be allowed to all regular physicians, to join the Society, or not, as they pleased, and stigmatizing as irregular practitioners, gentlemen who have been recognized as competent physicians, merely for the exercise of this freedom. This is an effect which the Committee believe was not distinctly in the contemplation of the Society, when the fifty-sixth By-Law was adopted; and as they think the object of that By-Law, in regard to the conduct of licentiates and doctors of medicine, who are not Fellows of the Society, may be satisfactorily accomplished by a different provision, they recommend its repeal, and the adoption of a substitute.

The Committee have great satisfaction in stating, that, although they came together from the different parts of the State, with views in some respects widely diverse from each other, they have, after a full expression and comparison of feelings and opinions, united in all these recommendations with entire unanimity and harmony. And in regard to a few other propositions which have been suggested by different members, but not agreed to by the Committee, the adoption of them has not been pressed in such a manner as to leave the least apprehension that the authors of them will retire from the Committee with disappointed or dissatisfied feelings. They have a confident persuasion that the adoption of the modifications, now proposed with such unanimity by the Committee, will so far satisfy the expectations of the profession in the western counties of the State, as to induce them,

at no distant period, to coöperate in all the efforts of the Society with the same harmony and interest that are now felt in other parts of it.

The Committee present with this Report the record of their proceedings, to which they beg leave to refer the Counsellors for any further explanation of their opinions, and for some recommendations, to which they respectfully ask the attention of the Counsellors, although not necessarily embraced in the leading purposes of their appointment.

In order to carry into effect the propositions embraced in this Report, the Committee recommend to the Counsellors the adoption of the subjoined resolution.

All of which is respectfully submitted.

By order of the Committee,

ENOCH HALE, *Chairman.*

JOHN C. DALTON, *Secretary.*

Worcester, July 11, 1839.

Resolved, That the Counsellors recommend to the Society, at the next annual meeting, to amend the By-Laws of the Society as follows:

1st. To strike out the second section of By-Law II, and insert the following words:

"2. The Counsellors shall be elected from among the Fellows of the Society, residing within the several districts or counties, as nearly as may be in the proportion of one Counsellor to every five Fellows; provided that at least one Counsellor shall be elected in each county;—and provided that the Society shall not be restricted from electing, on any special occasion, an additional number in any county. Ballots shall first be given for those Counsellors who shall have been elected by the district medical societies, agreeably to the provisions of the forty-fifth By-Law. Counsellors for such portions of the State as are not included in any district society, and for any districts from which no return of Counsellors elected by the district society may have been received, shall then be balloted for; and in such election, Fellows belonging

to any district society, which shall have selected its own Counsellors, shall not be entitled to ballot for Counsellors for other portions of the State."

2d. To insert the following as a new By-Law [to be numbered III, the other By-Laws to be numbered in conformity thereto].

III. "Any Fellow of the Society, or Counsellor, absent from any meeting, shall in all cases be entitled to vote by proxy."

3d. To insert the following as a new By-Law [to be numbered XLV].

XLV. "Any district medical society may elect, previously to the last Wednesday of May in each year, the number of Counsellors to which by its number of Fellows such district is entitled, and make return of such election to the Recording Secretary before the annual meeting of the Society."

4th. To repeal the fifty-sixth By-Law, and substitute the following [to be numbered LVIII].

LVIII. "If any licentiate of this Society, or Doctor of Medicine, graduated either at Harvard University or at the Berkshire Medical Institution, shall consult with, or aid or abet any irregular practitioner, he shall be liable to be deprived of the privileges of a licentiate, and to be declared an irregular practitioner."

5th. In the forty-fourth By-law, to strike out the words, "to be appropriated for a library, to belong to such district society."

RECORD OF PROCEEDINGS OF THE COMMITTEE.

Worcester, July 10, 1839, 10 *o'clock, A. M., Wednesday.*— Agreeably to a vote of the Counsellors of the Massachusetts Medical Society, passed at a session held May 30, 1839, a Committee, consisting of a member of the Society from each county, met as above to take into consideration the proposition of Dr. Belden, of Hampden county, relative to the expediency of certain alterations in the Constitution and By-Laws of the Society.

Present, Drs. Hale, from Suffolk; Williams, from Franklin; Warren, from Plymouth; Belden, from Hampden; Butler,

from Worcester; Mather, from Hampshire; Alden, from Norfolk; Swift, from Nantucket; Sampson, from Barnstable; Dalton, from Middlesex.

The meeting was organized by the choice of Dr. Hale as Chairman, and Dr. Dalton as Secretary.

The members were then respectively invited to offer a free and frank expression of their own views and feelings, and, as far as they were acquainted with them, of those of the members of the Society residing in their respective counties, in relation to the present organization and operations of the Society, and to make any suggestions which might occur to them, relative to the object had in view in their appointment.

After a full discussion and free and unreserved interchange of opinion,

On motion of Dr. Hale, a Sub-committee was chosen, for the purpose of embodying in a definite form the several propositions recommended in the course of the discussion, and to report the same for the action of the Committee.

Drs. Hale, Williams and Belden were appointed said Committee. The meeting then adjourned to 8 o'clock, P. M.

Eight o'clock, P. M.—Met according to adjournment.

Drs. Fowler, from Berkshire, and Spofford, from Essex, appeared, and took part in the discussions.

Dr. Hale, Chairman of the Sub-committee, then offered to the consideration of the meeting the following resolutions:

1. *Resolved*, That as the interests of the medical profession are promoted only by measures which increase its usefulness to the whole community, so the true prosperity of the Medical Society is to be advanced only by such means as contribute to the respectability and usefulness of the whole profession.

2. *Resolved*, That the benefits of a medical society are derived, not so much from the direct effects of its legislation, as from its influence upon the character and conduct of its members.

3. *Resolved*, That occasional meetings are of essential importance to the prosperity of the Medical Society, and the degree of utility of such meetings is very nearly in proportion

to the interest felt in them by the profession, and the spirit of improvement and harmony excited by them.

4. *Resolved*, That the advantages of such meetings are by no means limited to those who generally attend them, *provided* that they are so constituted as to secure a fair representation of the interests and feelings of the whole profession, and thus obtain a general confidence and coöperation.

5. *Resolved*, That some of the means for promoting medical improvement,—especially the establishment of libraries and cabinets, and the discussion of medical questions,—can best be conducted in smaller associations than the State Society, and therefore it should be, as it long has been, the policy of the Massachusetts Medical Society, to promote the formation and efficiency of district medical societies.

6. *Resolved*, That a more general formation of district medical societies, throughout the State, would greatly promote the interests of the Society, as well as those of the profession and the community at large.

7. *Resolved*, That this Committee recommend to the Counsellors and the Society such a modification of the By-Laws of the Society as shall embrace the following provisions:

1st. The Counsellors shall be chosen from the different parts of the State, as nearly as may be in proportion to the number of Fellows in the several districts and counties, provided that there shall be at least one Counsellor in each county, and provided, also, that the Society shall not be restricted from electing, on any special occasion, an additional number.

2d. Any district society may elect, previously to the last Wednesday of May, annually, the number of Counsellors, to which by its number of Fellows such district is entitled, and make return of such election to the Recording Secretary before the annual meeting of the Society. Counsellors for such portions of the State as are not included in any district society, and for any district from which no return of Counsellors elected by the district society may have been received, shall be elected at the annual meeting; and in such election,

Fellows belonging to any district society that shall have elected its own Counsellors, shall not be entitled to vote.

3d. Fellows of the Society, or Counsellors, absent from any meeting, shall, in all cases, be entitled to vote by proxy.

8. *Resolved*, That the Committee recommend a repeal of the fifty-sixth By-Law, and the adoption of a substitute which shall provide that any licentiate of the Society, or Doctor of Medicine of Harvard University, or of the Berkshire Medical Institution, who shall consult with, or aid or abet any irregular practitioner, shall be liable to be deprived of the privileges of a licentiate, and be declared an irregular practitioner.

9. *Resolved*, That the Committee recommend that the forty-fourth By-Law be amended in the first paragraph, by striking out the words, "to be appropriated for a library to belong to such district society."

The above resolutions, having been severally discussed, were thereupon unanimously adopted, the question having been taken separately on each resolution.

Voted, That a Sub-committee of two be now chosen to draft a report, embracing the doings of this Committee, for the consideration of the Counsellors of the Society.

Drs. Hale and Alden were appointed.

At half-past 12 o'clock,

Voted, To adjourn to to-morrow, at 8 o'clock, A. M.

July 11, *Thursday*, 8 *o'clock*, *A. M.*—Dr. Hale, as Chairman of the Sub-committee chosen last evening, having submitted to the Committee a Report on the subject committed to them, it was voted unanimously, that said Report be accepted.

Voted, That said Report be signed by the Chairman and Secretary of the Committee.

On motion of Dr. Swift,

Voted, That it be recommended to the Counsellors to adopt measures for procuring statistical returns annually from each county in the State, embracing the number of deaths occurring therein, with their causes, together with the respective age and sex of the deceased. Also, that in each county, where

attainable, daily meteorological observations be made, showing the quantity of rain, the height of the barometer and thermometer, and the course of the wind; and that, for present information and future reference, an accurate record of the above returns in a tabular form, be kept by the Society.

On motion of Dr. Hale,

Voted, That a Sub-committee be chosen, to arrange the pay roll of the Committee.

Drs. Butler, Williams and Sampson were appointed on said Committee.

Dr. Butler, Chairman of the above Committee, reported the amount of the pay roll of the Committee to be $175.

Voted, That the Secretary furnish the Treasurer of the Society the amount to which each member of the Committee is entitled for attendance on the duties of said Committee, under the vote of the Counsellors appointing them.

On motion of Dr. Swift, it was unanimously

Voted, That the thanks of this Committee be presented to Dr. Hale, for the able, impartial and courteous manner in which he has presided over its deliberations. Also, that our thanks be due to Dr. Butler, for his assiduous attentions to our comfort and entertainment, and to Dr. Dalton for his services as Secretary.

Voted, That the records of the proceedings of this Committee be signed by the Chairman and Secretary, and transmitted, with their Report, to the Counsellors.

ENOCH HALE, *Chairman.*

JOHN C. DALTON, *Secretary.*

Worcester, July 11, 1839.

Dr. Strong, from the Committee appointed at the annual meeting of the Society, at the request of Dr. Samuel A. Shurtleff, "to investigate certain charges made against him for recommending secret remedies," made the following Report:

That, however much Dr. Shurtleff may have suffered his name to be connected, perhaps inadvertently, with certain

remedies, yet they do not find that there has been any thing in his conduct, with regard to them, which renders him amenable to the action of the Society.

Voted, To accept the Report.

The subject of appointing delegates to the General Medical Convention having come up for consideration, it was

Voted, That the subject be referred to the next meeting of the Counsellors, and that the Corresponding Secretary be requested to take no action thereon.

Voted, That a Committee be appointed to prepare a new list of the Fellows of the Society, arranged by counties, with the date of admission or election of each Fellow, and of his discharge, by death or otherwise, so far as the same can be ascertained.

Drs. Hale, Alden, Adams, Homans, Otis and Townsend were appointed the Committee.

The following resolutions were submitted by Dr. Hale:

Resolved, That the Counsellors recommend to the Society, at the next annual meeting, to amend the sixth By-Law, so that it may read as follows:

VI. Those Fellows who have resigned the fellowship of this Society, with the permission of the Counsellors, after having arrived at the age of 60 years, shall, while living, be distinguished in the printed list of the Society by a peculiar mark; and shall be denominated *Retired Members*. They shall be entitled to all the privileges of Fellows, and shall conform to all the requirements of the Society, and be subject to all its penalties, except that they shall not be liable to assessments, nor shall they be bound to accept any office in the Society.

Resolved, That the Counsellors recommend to the Society to amend the eighth By-Law by striking out the concluding paragraph, beginning with the words, "From and after this annual meeting."

Voted, That the above resolutions be appended to the printed copy of the doings of the Worcester Committee.

On motion of Dr. Hale, it was

Voted, That the recommendation of the Committee at Worcester, respecting "statistical returns," be referred to a Committee of the Counsellors, to devise and report a plan, if any be practicable, for carrying the same into effect.

Drs. Hale, Swift and Storer were appointed the Committee.

Voted, To proceed to ballot for Fellows and Honorary Members.

The following gentlemen, having been regularly nominated, were then severally elected Fellows:

John W. Couch, Great Barrington; Moses Carter, Amesbury; Oliver Ford, Barnstable; Joseph Haskell, Rochester; George Sturtevant, Middleborough; Perez F. Doggett, Wareham; Newton Southworth, Rochester; Amory Glazier, Jason H. Archer, Foster Hooper, Thomas Wilbur, Fall River; Benjamin B. Sisson, Westport; Francis D. Bartlett, Dartmouth; Edward W. Greene, New Bedford; and John Perkins, Middleborough.

Marshall Hall, M. D., of London, was elected an Honorary Member.

Voted, That this meeting be dissolved.

Attest, S. D. TOWNSEND, *Recording Secretary*.

FEBRUARY MEETING, 1840.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl St., February 5th, 1840, at 11 o'clock, A. M.

The records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting of the Counsellors.

The Committee on Publications submitted the following Report:

The Committee on Publications respectfully report, that they have selected, for the 10th volume of the Library of Practical Medicine, the "Researches on the Yellow Fever of Gibraltar," by M. Louis, translated by George C. Shattuck, Jr., M. D. By the generosity of a liberal benefactor of the Society, they have been provided with six hundred copies, in a very beautiful style of execution, for distribution to the Fellows, without any expense to the Society's funds.

As yellow fever has prevailed in many of the southern and western cities of the United States the last summer, and thereby excited a strong degree of interest in regard to the disease among the profession in every part of the country, the Committee, in compliance with the wishes of the donor, have made arrangements for the supply of those Fellows who choose to call on the publishers for the volume in advance of the usual time of distribution. Those who do not thus receive their copies, will be supplied, in the usual manner, at the annual meeting in May next.

ENOCH HALE, *for the Committee.*

Voted, To accept the Report, and that the thanks of the Counsellors be presented, through the Committee on Publications, to the liberal donor of six hundred copies of the Researches on the Yellow Fever of Gibraltar, by M. Louis, for distribution to the Fellows, as Vol. X of the Library of Practical Medicine.

The Committee of the Counsellors, appointed to prepare a new list of Fellows of the Society, respectfully report:

That, with an amount of labor which they would hardly have been willing to undertake, if they had foreseen the full extent of it, they have prepared a catalogue of the Society, which they now present to the Counsellors.

The Fellows are arranged by counties, in alphabetical order, with the date of election or admission, and that of resignation and death, and the age of the deceased members,

as far as these circumstances could be ascertained. In the hope of obtaining the means of doing this more perfectly, the Committee availed themselves of the opportunity afforded by the distribution of the Report on the By-Laws, to request each Fellow of the Society to communicate information in regard to the decease and removal of members in his vicinity; but no answer was obtained from any one. It is highly desirable that these changes should be correctly recorded. Besides the natural interest that is felt in possessing an accurate catalogue of the Society as it now exists, it might save much inconvenience and loss in the distribution of the publications.

For the Committee,

(*Signed,*) ENOCH HALE, *Chairman.*

The resolution offered by the Committee of the Counsellors appointed to meet at Worcester, to take into consideration the whole subject of the Constitution and By-Laws of the Society, was read and considered by distinct propositions, and, after being amended, was adopted in the following words:

Resolved, That the Counsellors recommend to the Society, at the next annual meeting, to amend the By-Laws of the Society as follows:

1st. To strike out the second section of By-Law II, and insert the following words:

"2. The Counsellors shall be elected from among the Fellows of the Society, residing within the several districts or counties, as nearly as may be in the proportion of one Counsellor to every eight Fellows; provided that at least one Counsellor shall be elected in each county. Ballots shall first be given for Counsellors for those districts in which candidates shall have been selected by the district medical societies, agreeably to the provisions of the forty-fifth By-Law. Counsellors for such portions of the State as are not included in any district society, and for any districts from which no return of Counsellors selected by the district society may have been received, shall then be balloted for."

2d. To insert the following as a new By-Law [to be numbered III, the other By-Laws to be numbered in conformity thereto].

III. "Any Fellow of the Society, or Counsellor, absent from any meeting, shall, in all cases, be entitled to vote by proxy, duly authorized in writing, provided that no individual shall represent the vote of more than eight others, except in the election of Counsellors."

3d. To insert the following as a new By-Law [to be numbered XLV].

XLV. "Any district medical society may select, previously to the last Wednesday of May in each year, the number of Counsellors to which by its number of Fellows such district is entitled, and the Secretary of said society shall make return of such selection to the Recording Secretary before the annual meeting of the Society."

4th. To repeal the fifty-sixth By-Law, and substitute the following [to be numbered LVIII].

LVIII. "If any Licentiate of this Society, or Doctor of Medicine, graduated either at Harvard University or at the Berkshire Medical Institution, shall deal in or recommend secret medicines, or shall consult with, or aid or abet any irregular practitioner, he shall be liable to be deprived of the privileges of a licentiate, and to be declared an irregular practitioner."

5th. In the forty-fourth By-Law, to strike out the words, "to be appropriated for a library to belong to such district society."

The following resolutions, presented at the last meeting of the Counsellors, were then considered, and adopted as amended:

Resolved, That the Counsellors recommend to the Society, at the next annual meeting, to amend the sixth By-Law, so that it may read as follows:

VI. "Those Fellows who, after having arrived at the age of 60 years, have resigned the fellowship of this Society, with

the permission of the Counsellors, shall, while living, be distinguished in the printed list of the Society by a peculiar mark, and shall be denominated *Retired Members.* They shall be entitled to all the privileges of Fellows, and shall conform to all the requirements of the Society, and be subject to all its penalties, except that they shall not be liable to assessments, and that they shall not be bound to accept any office in the Society."

Resolved, That the Counsellors recommend to the Society to amend the eighth By-Law, by striking out the concluding paragraph, beginning with the words, "From and after this annual meeting," &c.

The following propositions were then offered and adopted:

Resolved, That the Counsellors recommend to the Society to amend the fourth Section of the 2d By-Law, by striking out the words, "except when the Society first decide by their vote that the matter is urgent."

Also, to amend the forty-second By-Law, by striking out the word "Corresponding," and inserting "Recording," before Secretary, in the fourth line of the second paragraph thereof.

Resolved, That the Counsellors recommend to the Society the repeal of the fourteenth "Order," and the adoption of the following:

14. "It shall be the duty of the Secretary of each district society to communicate to the Corresponding Secretary notice of any changes that may occur in his district, by the death or removal of a Fellow of the Society."

Resolved, That the Counsellors recommend to the Society to repeal the first of the "Rules and Orders of the Counsellors," and to substitute the following:

1. "A publication shall be issued annually, under the direction of the Committee on Publications, as early as may be after the annual meeting, and shall be distributed by the Librarian to each Fellow and Retired Member, and to the Honorary Members of the Society, by mail, or through the

medium of the district societies. Such publication shall contain the annual discourse,—unless otherwise directed by the Society or the Counsellors,—and such other medical communications as the Counsellors may authorize to be published; and, in an Appendix, an abstract of the proceedings of the Society and of the Counsellors, comprising the record of all their transactions, excepting only such as are of a private or personal nature; a list of the officers of the Society and of each district society; and a list of those who have become Fellows, or Honorary Members, and of those who have resigned fellowship during the preceding year."

Resolved, That the Counsellors recommend to the Society, at the next annual meeting, to adopt the following vote:

Voted, That all votes heretofore passed, either by the Society or the Counsellors, designed to have a permanent operation, be, and they hereby are, repealed, except so far as they have been incorporated into the By-Laws or Orders.

Voted, That the above resolution be printed with the next edition of the By-Laws.

Drs. Samuel Morrill and John Jeffries were appointed a Committee to examine the Treasurer's accounts.

Drs. Strong and Reynolds were chosen a Committee to examine the Library.

Drs. Putnam, Smith and Hooker were appointed a Committee to collect Cow Pock matter for distribution among the members at the next annual meeting.

Voted, That this meeting be dissolved.

(*Signed*,) S. D. TOWNSEND, *Recording Secretary*.

SPECIAL MEETING—MARCH 28, 1840.

A special meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl street, March 28, 1840.

The President stated that the meeting was called in consequence of his receiving the following communication:

GEORGE C. SHATTUCK, Esq., *President of Mass. Medical Society*,—

SIR,—By direction of the Committee of the Senate and House of Representatives, to whom is referred the Petition or Memorial of John S. Bartlett, concerning certain proceedings of the Massachusetts Medical Society, I inform you, that hearing of the memorialist will be further proceeded in next Monday afternoon, at half-past three o'clock, in Lobby No. 14, at the State House, where you and other members of the government of the Society may be present, if to you it shall seem good. Your obedient,

(*Signed*,) JAMES SAVAGE, *Chairman*.

Monday, 24th Feb, 1840.

Whereupon, on motion of Dr. Warren, it was

Resolved, That the President of the Society be requested to acknowledge respectfully a notice received from the Chairman of a Committee of the Honorable Senate and House of Representatives, which was appointed to investigate certain charges against the Massachusetts Medical Society, and to state,

That the Counsellors of the Society have, at various hearings, before a Committee of the Legislature, presented such facts and documents as the nature of the case seemed to call for; that these facts and documents are in the hands of the Legislature; and that the Counsellors of the Massachusetts Medical Society are ready to trust to such action of the Legislature thereon, as, in their wisdom, they may deem conformable to the Constitution and laws of this Commonwealth.

Dr. Hale offered the following, as an amendment to the amended By-Laws to be recommended to the Society for adoption, which was accepted:

In the By-Law to be numbered III, to strike out all after the word "provided," and insert the following: "That no Fellow shall be represented by any other than a Fellow, and no Counsellor by any other than a Counsellor, who shall, in

either case, be an inhabitant of his own county or district; and no Fellow or Counsellor shall at any time represent the votes of more than eight others."

The meeting was then dissolved.

S. D. TOWNSEND, *Recording Secretary.*

MAY MEETING, 1840.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's Room, Pearl St., 28th May, at 10 o'clock, A. M.

The records of the last meeting were read.

Dr. Hale read the Report of a Committee on "Statistical Returns," which was accepted and referred to a Committee to carry the recommendation of the Report into effect.

Drs. Hale, of Boston, Alden, of Randolph, and Swift, of Nantucket, were chosen to constitute that Committee.

The Committee appointed to consider the practicability of obtaining statistical returns of diseases, and of meteorological observations, respectfully report, that

The necessity of a correct *bill of mortality*, to the physician who wishes to investigate the history of disease with an approach to accuracy, is so self-evident, that any observations which might be presented here, would be considered not merely ill-judged, but also superfluous. That these bills have been hitherto so much neglected as to be of but little real utility, is equally apparent. To propose some measures for their better regulation,—by which they may be made not merely an account of the *number of deaths*, but also of the *sex*, *age*, *disease*, &c., &c.,—your Committee conceive they were appointed.

To the consideration of this subject, they have given their attention, and would ask leave respectfully to report,—That the Revised Statutes of the Commonwealth, published in 1836, require that "the town clerk shall keep a record of the

births and deaths of all persons within his town, and coming to his knowledge; and he shall specify in such record the day of each birth and death, and the names of the parents of such persons, if known." Thus, an individual who can have no possible interest to make any particular inquiries respecting the deceased, has the responsibility of conducting this important subject. It would be unreasonable to expect any information from such a source, which could be relied upon, save the mere *number of deaths*. Some other regulation, therefore, is very much needed. It has occurred to your Committee, that one of two courses might be pursued, to accomplish the desired object. Either that an effort be made, by means of the Legislature, to obtain more accurate information, by requiring every town clerk, or some other officer, to keep such a record of the deaths as may be desired by this Society; or, in case they should fail to do thus, be subject to a heavy penalty. Or, secondly, that this Society should take the matter into their own hands, and, by their fidelity and zeal in its prosecution, prove their sense of its importance.

Upon the former expedient, your Committee would place but little reliance. Even should the Legislature be induced to take any steps to answer our wishes (which is altogether uncertain), it would be very improbable that any important results could be thus obtained.

To the latter course alone, it is believed that the Society may look, and with confidence, for the accomplishment of their wishes. They are most directly interested in the establishment of a full and accurate bill of mortality; they are conscious of its present defects, and what changes are required; and they are most competent to make those changes.

Your Committee would therefore propose, that the Society look to the free and voluntary labors of its members, for the formation of such a bill as is needed. They would suggest the expediency of a printed circular being sent to every member of the Society, requesting him to prepare a careful list of the births which may occur in the town in which he resides; together with the deaths, the ages at which they

occur, the name of the disease, and any other particulars desired, upon a blank form, to be furnished him at the expense of the Society, and that these tables be sent in January of each year to the Recording Secretary, who shall prepare from them a general table, to be presented to the Society at the annual meeting; so that they may be valuable additions to the Society's transactions, should it be deemed advisable to publish them.

Although the preparation of such tables would necessarily require considerable labor, your Committee feel satisfied that the Fellows of this Society would promptly answer to such a call; that they would feel they were individually expected to exert themselves; and that they would gladly show their willingness and readiness, each, to the best of his ability, to comply with your wishes.

In regard to meteorological observations, the Committee are not prepared to offer any plan; but they would trust that some gentlemen in different parts of the State would of their own accord make returns of such observations in connection with their reports on the other topics proposed.

ENOCH HALE,
PAUL SWIFT,
D. HUMPHREYS STORER, } *Committee.*

Boston, May 28th, 1840.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting of the Counsellors.

The Corresponding Secretary also read a letter from the Secretary of the Southern District Medical Society, informing him of the number and names of its members, and its organization for the present year.

Voted, To proceed to the choice of officers for the year ensuing.

A letter was read from Dr. Shattuck, declining to be considered a candidate for re-election to the office of President.

Drs. Flint, of Leicester, Greene, of Groton, and Green, of Lowell, were appointed Scrutineers.

Rufus Wyman, M. D., of Roxbury, was chosen *President*.

Stephen Batchelder, M. D., of Royalston, was chosen *Vice President*, Dr. Miller having declined a re-election.

Solomon D. Townsend was chosen *Corresponding Secretary*, vice Dr. Homans, declined.

George W. Otis, Jr., *Recording Secretary*.

Woodbridge Strong, *Treasurer*.

Samuel Morrill, *Librarian*.

Censors for the First Medical District, and for the Society at large, A. L. Peirson, Z. B. Adams, John Jeffries, George B. Doane, Anson Hooker.

For the Second Medical District, John Green, C. W. Wilder, B. F. Heywood, Benjamin Pond, William Workman.

For the Third Medical District, S. W. Williams, David Bemis, Atherton Clark, Benjamin Barrett, E. E. Denniston.

For the Fourth Medical District, H. H. Childs, A. G. Welch, Royal Fowler, Charles Worthington, N. S. Babbit.

Committee on Publications, Enoch Hale, John Ware, John Homans.

Committee on Resignations, Woodbridge Strong, Zabdiel B. Adams, John Jeffries.

Edward Reynolds, M. D., of Boston, was chosen to deliver the next annual discourse.

Voted, That the thanks of the Counsellors be presented to George C. Shattuck, M. D., for the dignified and impartial manner in which he has discharged his duties, as President of this Society, and for his active, liberal and successful efforts in promoting its best interests.

Voted, That the thanks of the Counsellors be presented to Nathaniel Miller, M. D., for his able and impartial services, as Vice President of the Society.

Voted, That the thanks of the Counsellors be presented to Dr. Homans, for the faithful discharge of the arduous duties of his office, as Corresponding Secretary, and also for the discharge of other important offices which he has held in this Society for the last twenty years.

Voted, That the thanks of the Counsellors be presented to Dr. Channing, for his long, faithful and devoted services as Treasurer.

The petition of the members of the Society residing in Barnstable county, to be established as a District Medical Society, was granted.

The petition of the members of the Society residing in Hampden county, to be established as a District Medical Society, was granted.

Voted, That the thanks of the Counsellors be presented to the New York State Medical Society, for the donation of their publications.

The Report of the Treasurer on the subject of the Permanent Fund of the Society was referred to Drs. Bigelow, Hale and Walker.

The Report of the Censors for the First District of the Society was read and accepted.

The Report of the Committee on the Library was read and accepted.

Voted, That the Committee on Publications cause a new edition of the By-Laws, with the new list of Fellows, to be published.

Dr. Jones Guilford, of Spencer, was elected a Fellow.

The Committee on the Permanent Fund of the Society was instructed also to examine the accounts, and see to the transfer of the books and property of the Society from the late to the present Treasurer.

Voted, That this meeting be dissolved.

Attest, GEORGE W. OTIS, Jr., *Recording Secretary*.

The names of those who have become Fellows, or Honorary Members, during the past year, and of those who have resigned fellowship, are contained in the List of Fellows just published with the By-Laws of the Society.

Officers of the Massachusetts Medical Society,

ELECTED MAY 28, 1840.

RUFUS WYMAN, M. D., of Roxbury, *President.*

STEPHEN BACHELDER, M. D., of Royalston, *Vice President.*

SOLOMON D. TOWNSEND, *Corresponding Secretary.*

GEORGE W. OTIS, Jr., *Recording Secretary.*

WOODBRIDGE STRONG, *Treasurer.*

SAMUEL MORRILL, *Librarian.*

A. L. Peirson, Z. B. Adams, John Jeffries, George B. Doane, and Anson Hooker, *Censors for the Society at large, and for the First Medical District.*

John Green, B. F. Heywood, C. W. Wilder, Benjamin Pond, and William Workman, *Censors for the Second District.*

S. W. Williams, Atherton Clark, David Bemis, Benjamin Barrett, and E. E. Denniston, *Censors for the Third District.*

Henry H. Childs, Royal Fowler, Asa G. Welch, Charles Worthington, and Nathan S. Babbitt, *Censors for the Fourth District.*

Enoch Hale, John Ware, and John Homans, *Committee on Publications.*

Woodbridge Strong, Z. B. Adams, and J. Jeffries, *Committee on Resignations.*

Edward Reynolds, Jr., M. D., is appointed to read the next annual discourse.

Officers of District Medical Societies.

Essex Southern District Society—Andrew Nichols, Danvers, *President.* Abel L. Peirson, Salem, *Vice President.* George Choate, Salem, *Treasurer.* Benjamin Cox, Jr., Salem, *Secretary.* William P. Richardson, Salem, *Librarian.* Elected May, 1840.

Worcester District Society—Benjamin F. Heywood, Worcester, *President.* Charles W. Wilder, Leominster, *Vice President.* William Workman, Worcester, *Secretary* and *Treasurer.* Henry Bigelow, Worcester, *Librarian.* Elected June, 1840.

Berkshire District Society—Alfred Perry, Stockbridge, *President.* William H. Tyler, Lanesboro', *Vice President,* Robert Worthington, Lenox, *Secretary.* Oren Wright, Pittsfield, *Treasurer, Librarian,* and *Cabinet Keeper.* William H. Tyler, *Auditor.* Elected May, 1833.

Hampshire District Society—Benjamin Barrett, Northampton, *President.* Gardiner Dorrance, Amherst, *Vice President.* Elisha Mather, Northampton, *Secretary.* Watson Loud, Hadley, *Treasurer.* Edward E. Denniston, Northampton, *Librarian.* Elected September, 1839.

Southern District Society—William C. Whitredge, New Bedford, *President.* Peter Mackie, Wareham, and Amory Glazier, Fall River, *Vice Presidents.* Samuel Sawyer, Fairhaven, *Secretary.* Paul Spooner, New Bedford, *Treasurer.* William R. Wells, New Bedford, *Librarian.* Elected May, 1840.

Barnstable District Society—Recently chartered, no return of officers.

Hampden District Society—Recently chartered, no return.

Secretaries of District Societies are respectfully reminded of the importance of making an early return of officers elected in their several societies. See By-Laws, page 48.

APPENDIX FOR 1841.

PROCEEDINGS OF THE MASSACHUSETTS MEDICAL SOCIETY.

ANNUAL MEETING.

The Annual Meeting of the Massachusetts Medical Society was held on Wednesday, May 26th, 1841, at the Temple, Tremont street, at 10 o'clock, A. M.

The records of the last meeting of the Society, and of the several meetings of the Counsellors, were read.

The report of the Committee, appointed at a special meeting of the Counsellors, held Feb. 18th, to ascertain and report at the next annual meeting of the Society, the number of Fellows then residing in each county, and within the limits of each District Medical Society, and the number of Counsellors to be elected in each, was read and accepted.

REPORT.

The Committee appointed at a special meeting of the Counsellors, held February 18th, "to ascertain and report at the next annual meeting of the Society, the number of Fellows then residing in each county, and within the limits of each District Medical Society, and the number of Counsellors to be elected in each," respectfully report:

That by the second section of the second By-Law, it is required, that "the Counsellors shall be elected from among the Fellows of the Society, residing within the several districts or counties, as nearly as may be in the proportion of one Counsellor to every eight fellows; provided that at least one Counsellor shall be elected in each county. Ballots shall first be given for Counsellors for those districts in which candidates shall have been selected by the district medical societies, agreeably to the provisions of the 45th By-Law. Counsellors for such portions of the State as are not included in any district society, and for any districts from which no return of Counsellors, selected by the district society, may have been received, shall then be balloted for.

In accordance with this direction, the Committee have taken up the counties alphabetically, and find that

Barnstable County contains 18 Fellows, all of whom are connected with the Barnstable District Medical Society, which gives it 2⅜ Counsellors.

The Committee have adopted the rule, that where the fraction amounts to one half, an additional Counsellor should be allowed.

Berkshire County, 32 Fellows, members of the Berkshire District Medical Society; 4 Counsellors.

Bristol County, 32 Fellows; connected with the Southern District Medical Society, 23, 2⅞ or 3 Counsellors; out of the District Society, 9—1 Counsellor.

Duke's County, 3 Fellows; 1 Counsellor, all connected with the Southern District Medical Society.

Essex County. 75 Fellows, 9⅜ Counsellors; connected with the Essex Southern District Medical Society, 48—6 Counsellors; out of the District Society, 27—3⅜ Counsellors.

Franklin County, 15 Fellows, 1⅞—2 Counsellors.

Hampden County, 20 Fellows, 2½—3 Counsellors, all members of Hampden District Medical Society.

Hampshire County, 21 Fellows, all of whom are members of Hampshire District Medical Society, 2⅝ or 3 Counsellors.

Middlesex County, 105 Fellows, 13⅛ Counsellors.

Nantucket County, 3 Fellows, who are members of the Southern District Medical Society, 1 Counsellor.

Norfolk County, 47 Fellows, 5¼ or 6 Counsellors.

Plymouth County, 34 Fellows, 9 members of the Southern District Medical Society, 1 Counsellor; 25 unconnected with the District Society, 3¼—3 Counsellors.

Suffolk County, 148 Fellows, 18½—19 Counsellors.

Worcester County, 77 Fellows, all of whom are members of the Worcester District Medical Society, 9¼—10 Counsellors.

The Committee would recommend, that after the election of Counsellors for the district medical societies, according to the provisions of the By-Law, in order to expedite the business of the Society and prevent confusion, the election for counties should be made separately and alphabetically.

All which is respectfully submitted, by

S. D. TOWNSEND,
GEORGE W. OTIS, Jr., } *Committee.*
S. MORRILL,

Boston, May 26th, 1841.

Letters were then read from the Secretaries of the Barnstable District Medical Society, the Hampshire District Medical Society, and the Hampden District Medical Society, stating the organization of their several societies for the year 1841, and nominating to the Society the Fellows that had been selected for their Counsellors.

Voted, To proceed to ballot for Counsellors.

Drs. Z. B. Adams, of Boston, Bartlett, of Concord, Lewis of Boston, Willard, of Uxbridge, Storer, of Boston, Fearing of Nantucket, were appointed Scrutineers.

The Scrutineers reported the following Fellows as having been elected Counsellors:

Suffolk County. Drs. James Jackson, George C. Shattuck, Jacob Bigelow, Enoch Hale, Solomon D. Townsend, John Ware, Z. B. Adams, Edward Reynolds, Jr., John Homans, Woodbridge Strong, John Jeffries, George B. Doane, George W.

Otis, Jr., Winslow Lewis, Jr., Samuel Morrill, Jerome V. C. Smith, D. Humphreys Storer, John Flint, John D. Fisher.

Norfolk County. Drs. Nathaniel Miller, Rufus Wyman, Samuel Bugbee, Robert Thaxter, Jeremy Stimpson, Ebenezer Alden.

Middlesex County. Drs. Thomas Bucklin, Timothy Wellington, Zadok Howe, William J. Walker, John C. Dalton, Josiah Bartlett, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker, Nehemiah Cutter, J. Stearns Hurd, Charles F. Chaplin.

Franklin County. Drs. Stephen W. Williams, Alpheus F. Stone.

Nantucket County. Dr. Elisha P. Fearing.

Southern District Medical Society. Drs. Alexander Read, Paul Spooner, Leroy M. Yale, William Gordon, Amory Glazier.

Bristol County, not included in District Society. Dr. Caleb Swan.

Barnstable District Medical Society. Drs. Joseph Sampson, Aaron Cornish.

Hampden District Medical Society. Drs. Joseph H. Flint, David Bemis, John Appleton.

Hampshire District Medical Society. Drs. Atherton Clark, Benjamin Barrett, Gardiner Dorrance.

Worcester District Medical Society. Drs. Stephen Bachelder, John Green, Edward Flint, Benjamin F. Heywood, Charles W. Wilder, George Willard, John G. Metcalf, Pierson T. Kendall, Joseph Stone, William W. Workman.

Essex Southern District Medical Society. Drs. Andrew Nichols, Abel L. Peirson, Edward L. Coffin, George Choate, Joseph Reynolds, Ebenezer Hunt.

Essex County, not in District Society. Drs. John Atkinson, George Cogswell, Isaac Boyd.

Plymouth County, not in District Society. Drs. Nathan Hayward, Ezekiel Thaxter, Paul R. Nichols.

Berkshire District Medical Society. Drs. Henry H. Childs, Asa G. Welch, Royal Fowler, Robert Worthington.

The Treasurer submitted his annual reports.

From that of Receipts and Expenditures, it appeared that the balance on hand last year was $160 02

Cash received at annual meeting, . . .	771 10
Assessments at sundry times, ...	482 60
	1413 72
Expenditures during the year, ...	944 01
Leaving a balance in the Treasury of . .	$469 71

From the Report on the Permanent Fund, it appears, that the whole is invested in the Massachusetts Hospital Life Insurance Company, in three policies, and, with interest, amounts to $7117 43.

There are notes now due the Society amounting to $79 00.

The following Report was then read:

The Committee appointed to examine the books and accounts of the Treasurer, have attended to that duty, and report, that the books are correctly kept, and the account is correctly cast and vouched.

The amount of expenses charged, is $944 01, and the sums received amount to $1413 72; leaving a balance in the hands of the Treasurer of $469 71.

They have also examined the policies of the General Hospital Insurance Company, and find them correct, and in accordance with the Report of the Treasurer on the Permanent Fund of the Society. The amount of the fund on the 1st of January, was $7117 43.

(*Signed,*) JOHN JEFFRIES,
S. MORRILL.

Boston, May 26th, 1841.

Voted, To accept the reports of the Treasurer and that of the Auditing Committee.

The following Report was read and accepted:

The Committee appointed to examine the Library, report that they have attended to the duty, and find the books in good order and well conditioned

(*Signed,*) WOODBRIDGE STRONG,
EDWARD REYNOLDS, Jr.

Dr. Storer, from the Committee appointed at the February meeting of the Counsellors, to consider the expediency of appropriating the sum annually expended for the publication of a medical volume, to the purchase of standard medical works, presented the following Report, which was read and accepted:

REPORT.

The Committee appointed by the Council to consider the expediency of appropriating the annual assessments of its members to the purchase of standard medical works, which shall belong to the Society, instead of the course at present pursued, have attended to that duty, and would respectfully report:

That in order to obtain the views of the members generally upon this subject, they have carried on an extensive correspondence with the members of the Society, in all parts of the State, and have satisfied themselves, that it is desirable that no change should be made; that the Fellows of the Society prefer that the present state of things should continue.

While your Committee are compelled, in compliance with the almost universal wish of the Society, to recommend, that the annual assessments of its members be appropriated as they have been heretofore, they cannot refrain from expressing their regret, that any misconception should have existed regarding the *motive*, which prompted the proposition, to consider the expediency of which they were appointed.

Those of the Society who reside in Boston have much greater facilities for obtaining new and valuable medical works, than those who live out of the city. It occurred to one of your Committee, who had been repeatedly applied to during the last two or three years, by his brethren in the interior of the State, for

the loan of medical works, that a great object would be gained, if a medical library could be formed by the Society, to which all its members could have access; that it would do much for the advancement of science throughout the State; and that its possession would tend to produce greater good fellowship.

When the motion, for the appointment of a Committee to consider this subject was offered, it embraced the whole design of the mover—he had no wish beyond the formation of a *medical library*—he was actuated by no selfishness; *Massachusetts*, not Boston, he proposed as its location; any spot within the territory of the State would have been equally acceptable to your Committee.

All which, is respectfully submitted.

D. H. STORER,
JACOB BIGELOW,
GEORGE HAYWARD, } *Committee.*

A proposition, submitted by Dr. Walker, to amend the twenty-fifth By-Law, by adding the words "or to make extracts therefrom," was ordered to lie on the table.

At one o'clock, the Annual Discourse was read by Dr. Reynolds, on "The present Condition, Prospects, and Duties of the Medical Profession."

On motion of Dr. Peirson, it was

Voted, That the thanks of the Society be presented to Dr. Reynolds for his learned, interesting and candid discourse.

The motion relating to the amendment of the twenty-fifth By-Law was now called from the table by Dr. Walker, and, upon its being suggested that entertaining this proposition at the present meeting of the Society was contrary to the fourth By-Law, Dr. Walker offered the following vote:

Voted, That the words in the fourth section of the By-Laws, viz., "Alterations proposed by a Fellow shall be referred to the Counsellors, and shall not be acted upon until presented anew by them," be stricken out from the said section. The Chair decided that it was not in order to act upon this subject at the

present meeting, but that it must first be submitted to the Counsellors. Dr. Walker appealed from the decision of the Chair. The appeal was not sustained by the Society. The motion to amend the fourth section of the By-laws, was referred to the Counsellors.

Voted, To dissolve the meeting.

Attest, GEORGE W. OTIS, Jr., *Recording Secretary.*

Proceedings of the Counsellors.

OCTOBER MEETING, 1840.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's room, Pearl street, October 7th, 1840.

The records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting of the Counsellors.

The Corresponding Secretary read a letter from the Secretary of the Hampshire District Medical Society, giving information of the proceedings of said Society, which letter was placed on file.

The Corresponding Secretary also read a letter from the Secretary of the Censors of the third Medical District, which was placed on file.

The Committee on the Permanent Fund of the Society, made a Report, stating

That they had examined the policies issued in favor of the Society, by the Massachusetts Hospital Life Insurance Company,

and found that the agreements are made with the Massachusetts Medical Society, and not to any other person or parties whatever. They are, therefore, of opinion, that these funds are safe; and that they cannot be drawn out except by the Society itself, acting in conformity to the laws of the Commonwealth, and its own By-Laws.

This Report was accepted.

The Corresponding Secretary read a letter from Dr. Paul L. Nichols, of Kingston, respecting the propagation of leeches, which letter was referred to the Committee on Publications, with authority to publish it for general information, if the author consent.

To the Corresponding Secretary of the Mass. Med. Society.

Dear Sir,—The great trouble and frequent impossibility of procuring leeches in the country, when I have felt the need of them, has induced me to seek out some way of preserving, and, if possible, of propagating them. And I now take the liberty of communicating to you, and through you, to the Massachusetts Medical Society (should you think it worth the trouble), the result thus far of my experiment.

Some time last autumn, I was furnished with about a hundred foreign leeches. They were in a very unpromising state for preservation, having all been recently used and thrown aside for a time, then crowded into a small box, gorged with blood, and transported in this state over thirty miles. I had a box prepared about fourteen inches square, and six inches deep, covered with a lid so constructed as to admit air and light. Within this was a smaller box perforated. The inner box was filled with clay, the outer one with river water. Into this double box (which was provided with a stopcock for changing the water), I put the abovementioned leeches. Six or eight weeks afterwards, I received about as many more, in the same unpromising state. Not wishing to mix them, I removed those first boxed into bottles of water, and found them well cleansed, and apparently healthy—with the very small loss of not more than four per cent.

The parcel last received, I put into the box as before, occasionally changing the water, where they cleansed themselves, and were successfully preserved during the winter. Finding it inconvenient to change the water in the bottles as often as it was necessary in the cold weather, I prepared another box, about nine inches square, of the same depth, and covered with a lid as the first, but single, which I filled with common brick clay, broken up and moistened with water; and into it I put this parcel of leeches, and preserved them during the winter, by merely sprinkling them once in a week or ten days. From these boxes (and mostly from the single one) I used from time to time, during the season, in my own practice, as nearly as I can recollect, from three to four dozen. I also furnished my professional brethren, Drs. Hayward and Warren, of Plymouth, and Wild, of Duxbury, with as many more. While I was using them in this way, I was often pleased to discover among them those of different sizes, from half an inch to an inch long, which I knew I had not put there, convincing me that my object was accomplished. And in the spring, on removing the clay, and counting, I found, to my great joy, that my stock nearly held good.

Now, sir, I have to express my conviction that this is not the best that can be done, and that I expect in future to do *very much better*. For during all this time I had been inattentive to the *manner* of their propagating, not recollecting that the leech is an *oviparous* animal; and every time that I rashly disturbed the clay to get a leech, I probably destroyed the eggs of a dozen. It was not till I accidentally found the cocoons amongst the clay last spring, that I was warned of the impropriety of disturbing the clay in taking the leech. This is easily avoided; for sprinkling with a little water will cause them to rise to the surface and enable you to take them off at pleasure. I send you two of the broken cocoons, which I accidentally found, and shall probably be able to send you more, if desired, in a more perfect state.

At present, my box of clay has not been broken up since the first of June; and by moistening it to-day (as I am often doing)

for the purpose of taking some out for use, I find some of very small size; which causes me to hope, and confidently believe, that I shall be able, by-and-by, to render you a more satisfactory account, should you wish it.

Permit me, from what I have already observed, to express to you my firm belief, that any of our brethren, situated as I am, in the country, may save themselves much trouble and expense by a little attention to this matter, and by purchasing fifty leeches, may, by a *very* little care, keep themselves provided for their life time. It was my intention, at our last annual meeting, to have made some statement on this subject to the whole Society; but want of time and opportunity prevented. My object is to do good, and if in your hands, these imperfect suggestions can be made in any way conducive to that end, I am happy to submit them. With great respect, truly yours,

P. L. NICHOLS.

Kingston, August 20, 1840.

On motion of Dr. Hale, it was

Voted, That the vacancy in the Committee on leeches, occasioned by the death of Dr. Mather, be now filled.

Dr. Storer was elected to fill this vacancy.

On motion of Dr. Hale, it was

Voted, That the Committee on Publications select and publish a volume of the Library of Practical Medicine, to be distributed at the next annual meeting of the Society; one copy to each District Society's library, and to each retired member who shall apply for it, and to each Fellow who shall have paid his assessments; provided that the expense shall not exceed $500.

On motion of Dr. Bigelow, it was

Voted, That the Treasurer be requested to report the names of all Fellows, who, on being called on to discharge their dues to the Society, have refused so to do; and all those who have been delinquent over six years.

The Counsellors then proceeded to ballot for members.

Samuel G. Morton, of Philadelphia, was chosen an Honorary Member.

The following gentlemen were chosen Fellows:

John L. Lathrop, Provincetown; Chester Bardwell, Whately; William Greene, Falmouth; Samuel A. Orr, East Bridgewater; Daniel Thompson, Northampton; Thomas Meekins, Williamsburg; Timothy J. Gridley, Amherst; Philemon Stacy, Hadley; John S. Champney, Abington; Jehiel Abbot, Westfield; Stephen Bates, Charlemont; James Dean, Greenfield.

Meeting dissolved.

GEORGE W. OTIS, Jr., *Recording Secretary.*

FEBRUARY MEETING, 1841.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's room, Pearl street, February 3d, 1841.

The records of the last meeting were read.

The President presented a letter from Dr. Bartlett, of Lowell, covering an order of notice from the Legislature, on the petition of E. Huntington and others, of Lowell, praying that a Medical School may be established in that place.

On motion of Dr. Hale, it was

Voted, That the order of notice be referred to a Committee, to report at this meeting.

Drs. Warren, Hale, and Nichols, of Danvers, were appointed this Committee.

The Recording Secretary read a letter from the Secretary of the Barnstable District Medical Society, containing an account of the organization of said Society, which is as follows:

Joseph Sampson, of Brewster, *President.* Aaron Cornish, of Falmouth, *Vice President.* Henry Tuck, of Barnstable, *Secretary.* James B. Forsyth, of Sandwich, *Treasurer.* Thomas B. Jackson, of Yarmouth, *Librarian* and *Curator.*

The Committee on the order of notice, report that they do not perceive that the interests of this Society are likely to be interfered with by the application of E. Huntington and others; but, as it is possible that the power of this Society to examine candidates and grant licenses may be involved, they recommend that a Committee be appointed to attend to the course of proceedings in regard to the above application, and to request the President to call a meeting of the Counsellors, to attend to the interests of the Society, if they should deem it necessary.

Also, that this Committee ascertain whether any provision is made in the act proposed, for a body of independent overseers to the proposed institution; and, if not, then the Committee adopt such measures as may seem necessary to introduce such provision.

The Report was accepted; and Drs. Warren, Nichols, and Homans were appointed a Committee to carry it into effect.

Dr. Hale, from the Statistical Committee, submitted the following Report, with a Memorial to be addressed to the Legislature, both of which were accepted.

On motion of Dr. Hale, it was

Voted, That the Memorial be signed by the President, and be presented to the Legislature by a Committee.

MASSACHUSETTS MEDICAL SOCIETY.

COUNSELLORS' MEETING, FEBRUARY 3, 1841.

The Committee appointed to carry into effect the recommendations of a Report, adopted by the Counsellors at their meeting in May last, respectfully report:

That after giving the subject much attention, they found themselves unable to fix upon any plan for a circular and returns which they believed would accomplish the purposes designed. Statistical returns, to be of any value, must be exact. It would answer but little purpose for the Fellows of this Society to record and return the births and deaths occurring under their own observation, because the circle of practice of each is indefinite, so that the numbers could not be compared with a known

amount of population. And if they should attempt, as is recommended in the Report referred to this Committee, to report the numbers each in the town in which he resides, they would find that these numbers cannot be ascertained, by any means within the reach of individual exertion. The radical difficulty is, that no efficient registers are kept of either deaths or births, in any part of the Commonwealth. This difficulty the Committee are persuaded can only be remedied by the Legislature. The Committee, therefore, respectfully recommend, that the Counsellors present a Memorial to the Legislature now in session, praying them to enact a law that shall provide for an effectual system of registration and return of the deaths, births and marriages in all the towns in this Commonwealth.

The form of a Memorial to the Legislature is herewith respectfully submitted.

ENOCH HALE, *for the Committee.*

To the Senate and House of Representatives of the Commonwealth of Massachusetts.

The Memorial of the Counsellors of the Massachusetts Medical Society respectfully represents:

That the interests of humanity and science, as well as those of morals and the public health, would be essentially promoted by an efficient registration and return of deaths, births and marriages in all the towns of this Commonwealth. The law now requires a record of births and marriages; but the provision is not such, your memorialists are informed, as to secure any general or adequate attention being paid to it. No public record of deaths is required by law, and none is made, except in a very few places. And no provision is made for any return of such records as are kept, so that their results may be rendered available for the purposes of general utility.

The census of successive periods shows a rapid rate of increase of our population, exhibiting the remarkable fact, that the number of persons now living in this country is greater than that of all who have ever died in it since the first settlement of the country by Europeans. But in what degree this increase

is the effect of causes naturally existing among us, or how far it is produced by immigration, there are at present no means of knowing. This, and many other questions of great importance in political economy and other branches of science, may be ascertained by an accurate comparison of the births and deaths with the existing population. The influence of the different employments and states of society on the public morals and the general welfare would be exhibited, and thus the means may be obtained of judging to what extent each should be fostered and encouraged.

But it is on account of its importance in promoting the public health, that your memorialists, as physicians, attach the strongest interest to this measure. Many of the causes of disease, as they affect different communities, engaged in a great variety of occupations, can only be ascertained by observations on an extensive scale, far beyond the reach of individual research. An accurate return of deaths from the different sections of the State, for a series of years, would greatly aid in the investigation of these causes, and would doubtless do much towards enabling us to find means for the removal of some of them. For example, the relative prevalence of consumption is much greater in some places than in others; and there are those who believe that its prevalence is in a great degree counteracted by that of certain other diseases. A full establishment of the truth in regard to this opinion, as it might be established by such returns as we propose, might do something at least to diminish the mortality of a disease, which now cuts off so many at the most interesting and useful period of life.

Your memorialists will not attempt to present more than a very few of the considerations which might be offered in favor of the measure, to which they respectfully but earnestly call the attention of the Legislature. They doubt not that many others of equal weight will readily occur to the minds of the members of your honorable body, whenever they are able to give to the subject the degree of reflection, to which its importance justly entitles it. They would only suggest, in addition, that an inquiry into the causes of death, for the purposes of a record, might

often aid in no slight degree the objects of justice, and not unfrequently diminish or prevent the trouble and expense of a coroner's inquest.

The valuable results which have proceeded from the new system of registration recently adopted in England, furnish the greatest encouragement to believe that results no less beneficial might easily be obtained among ourselves; where the divisions into towns of convenient extent, and the provision of municipal officers already existing, would greatly facilitate its introduction, with such modifications as the condition and habits of our people might require, or as observation and inquiry might suggest. Your memorialists believe that they may confidently promise the prompt and cheerful co-operation of the whole medical profession throughout the Commonwealth, in any measures which the wisdom of the Legislature may devise for the accomplishment of this highly desirable object.

Your memorialists, therefore, pray the Legislature to take the subject into consideration, and to enact a law which shall provide an effectual system of registration and return of the deaths, births and marriages, in all the towns in this Commonwealth.

By order of the Counsellors of the Massachusetts Medical Society. (*Signed,*)

RUFUS WYMAN, *Pres. Mass. Med. Society.*

GEORGE W. OTIS, JR., *Secretary.*

The Committee on Statistics was appointed to carry this vote into effect.

The Corresponding Secretary read a letter from Dr. Childs, of the Berkshire District, on arrearages of the members of that District, and the course that had recently been pursued in making collections.

Dr. Strong explained, and reported verbally on the subject committed to him at the last meeting of the Counsellors.

On motion of Dr. Adams, it was

Voted, That the Treasurer, with the concurrence of the President, shall have the power to settle with all such Fellows as

owe more than number of annual assessments; either by remitting the whole or part of the same, or by taking any legal measures according to their judgment. This vote to continue in force until the next annual meeting of the Society.

On motion of Dr. Storer, it was

Voted, That a Committee be appointed to consider the expediency of appropriating the sum annually expended for the publication of a medical volume, to the purchase of standard medical works, and to report thereon at the next annual meeting.

Drs. Storer, Bigelow, and Hayward were appointed this Committee.

The following gentlemen were elected Fellows:

Jesse W. Rice, Wilbraham; Dr. Deane, Holland; John Smith, Aaron Shaw, Wales; Asa Lincoln, Ebenezer Knight, Brimfield; Oliver McKinsley, Alvin Smith, Monson; A. Davis, Marcus Shearer, Palmer; Washington B. Alden, Ludlow; William Swan, George Frost, Jefferson Church, John I. Bassett, Ezra Osborne, John B. Bridgman, James M. Smith, Elihu Halliday, Springfield; Rhoderick A. White, Granville; Silas P. Wright, Horatio Bryant, Blandford; T. H. D'Wolf, Dr. Moore, James S. White, Chester; James Deane, Greenfield; W. A. Wilkins, Leonard Morgan, Leyden; Humphrey Gould, Rowe; Joseph Emerson, Heath; Stephen Bates, Moses Barrett, Charlemont; Charles M. Duncan, George Ball, Shelburne; Nathaniel G. Trow, Buckland; Milo Wilson, Ashfield; Chester Bardwell, Myron Harwood, Whately; Loring Allen, South Deerfield; Abraham S. Haskell, Deerfield; David Bradford, Montague; Philip Hall, Northfield; Bradley Noyes, New Salem; Abbot White, Shutesbury; Edward Barton, Orange; Robert Andrews, South Orange; Dr. Champlin, West Springfield.

Voted, To dissolve the meeting.

GEORGE W. OTIS, Jr., *Recording Secretary.*

SPECIAL MEETING.

A special meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's room, on Thursday, February 18th, 1841.

The proceedings of the last meeting were read.

The President laid before the Counsellors the following communication:

To RUFUS WYMAN, M. D., *President of the Massachusetts Medical Society*:

The subscribers, Counsellors of the Massachusetts Medical Society, request you to call a special meeting of the Counsellors on Thursday, the 18th instant, at 11 o'clock, A. M.

(*Signed,*) JOHN HOMANS,
EDWARD REYNOLDS, JR.,
DAVID OSGOOD,
D. H. STORER,
W. STRONG.

Boston, February 12, 1841.

The President then caused to be read the following communication:

DR. WYMAN, *President of the Mass. Medical Society*:

Sir,—I have been directed to communicate to you the following vote, just adopted by the Committee on Education. The same is also communicated to Dr. G. W. Otis.

Voted, That the Counsellors of the Massachusetts Medical Society be requested to give, as early as may be convenient, to the Committee of Education of the House of Representatives, their objections, if any, to the granting of the petition now before that Committee, for the incorporation of a Medical Institution at Lowell.

Respectfully,
J. A. SHAW.

Boston, February 10th, 1841.

On motion of Dr. Warren, it was

Voted, That a Committee be appointed to select and contract for a suitable room, wherein to hold the meetings of the Counsellors.

Drs. Warren and Lewis were appointed to constitute that Committee.

Dr. Warren, in behalf of the Committee appointed at the last meeting of the Counsellors on the application of E. Huntington and others to the Legislature, made the following Report:

The Committee appointed at the last meeting of the Counsellors to attend to the course of the application to the Legislature for a medical school in Lowell, beg leave to report:

That they have, in conformity with the vote of the Counsellors, attended the meetings of the Legislative Committee to whom this subject was referred, that no report has yet been made by that Committee; and that, therefore, they would recommend a continued attention to the subject, in order that the privileges of this Society may be guarded from invasion and encroachment, and that a Committee, consisting of the officers of the Society, be appointed, to attend to the further progress of the application.

By order of the Committee. J. C. WARREN.

February 7th, 1841.

This report was accepted, and the Committee accordingly appointed.

Dr. James Jackson offered the following vote:

The Committee on Education of the House of Representatives having requested the Counsellors of the Massachusetts Medical Society to give their objections, if any, to the granting of the petition now before that Committee, for the incorporation of a medical institution at Lowell, the Counsellors beg leave to make the following reply to that Committee:

At the meeting of the Counsellors on the first Wednesday in February, a notice was given them from the Committee on Education, of the petition for a medical institution at Lowell; but the Counsellors then thought it sufficient to suggest the importance of having proper guards placed about any institution which asked for the privilege of conferring medical degrees,

and they abstained from engaging in the consideration of the expediency of forming the institution proposed. Under this renewed application to them, the Counsellors conceive that the Committee wishes to ascertain their views on the point, and that it is their duty to give them. They therefore submit the following opinions and considerations to the Committee:

The Counsellors think it obvious, that the public good rather than the private interest of individuals ought to decide all questions relating to the general subject of medical education.

It is the interest of the public, that those who are declared qualified to take charge of the health and lives of their fellow-men, should have undergone the most thorough education which the circumstances of our community will permit; and should be faithfully examined in regard to their attainments.

The Counsellors believe, that a thorough medical education, which shall qualify young men to enter on practice at the expiration of their pupilage, can be best obtained in those situations where pupils enjoy opportunities of forming a personal and practical acquaintance with the anatomy of the human body, and with medical and surgical practice in all its branches.

Such opportunities, as connected with medical schools, are to be found only in cities which possess extensive and well-endowed hospitals, together with ample buildings and apparatus for the demonstration of all the branches of medical science; and there is not, probably, any instance in which a medical school has become eminently flourishing or useful, without establishments and facilities of this sort.

The Counsellors are of opinion, that the medical school now existing in Boston possesses abundant facilities of the kind abovementioned. From what they know of the time and labor expended by the professors of that school on the various branches of medical science, and also of the ability and faithfulness of those professors, in addition to the local advantages of the institution, they are inclined to believe, that the course of instruction in that school, considered as a whole, is superior to that of any medical school in New England, and equal to that of any in the United States.

In a city like Boston, there will be no difficulty, at any future time, in finding resident physicians and surgeons, not only competent on the score of learning, but also qualified by experience and practice to form correct judgments in the branches to be taught, and who will be willing to give their time to the business of instruction. The probability, at least, of finding such must always be greater, the larger the town or city in which they are to be sought.

In New England the number of medical schools is already two or three times greater than in any corresponding amount of population in the United States. In consequence of the excess of competition thus produced, few of these schools are flourishing, some are languishing, and others virtually extinct.

If schools are still to be multiplied, especially in the neighborhood of each other, it will tend to enfeeble and degrade the office of medical teaching, and render it difficult to engage the services of persons duly qualified to fill its departments.

The Counsellors do not perceive, either in the situation or advantages of Lowell, any peculiar fitness in that city for becoming the seat of a medical institution, which may not be found, nearly in the same degree, in the other large towns in the Commonwealth. And if the expediency of multiplying schools be once admitted, they fear that an unworthy spirit of competition would soon be engendered; which would tend, not to educate better physicians, but to attract more students, by lowering the amount of acquisitions required from them preparatory to entering practice. The Counsellors are, therefore, fully of opinion, that the public good, which requires that physicians should be well educated, would be injured, rather than advanced, by the incorporation of a medical school at Lowell.

It was now moved by Dr. Jackson, that this vote be adopted as a reply to the Committee of the Legislature.

Pending this motion, on motion of Dr. Walker, it was

Voted, That when the main question be taken, it be by yeas and nays.

On motion of Dr. Bigelow, it was

Voted, To excuse the faculty of Harvard University from voting on this question.

After considerable discussion, in which Drs. Strong, Jackson, Warren, and others participated, upon taking the question, it appeared that 17 Counsellors voted in the affirmative, and 5 in the negative.

The Counsellors voting in the affirmative were, Drs. Morrill, Adams, Doane, Jeffries, Barker, Storer, Osgood, Johnson, Peirson, Reynolds, Hooker, Hale, Jackson, Stimpson, Coffin, Townsend, and Otis.

The Counsellors voting in the negative were, Drs. Walker, Hurd, Hildreth, Dalton, and Strong.

So the vote was adopted, as a reply of the Counsellors to the Committee of the Legislature.

On motion of Dr. Jackson, it was

Voted, That a copy of this vote, duly authenticated by the President and Recording Secretary, be transmitted to the Chairman of the Committee on Education of the Legislature.

The following protest was, by vote of the Counsellors, directed to be entered on the records.

The subscribers hereby protest against the doings of the Counsellors of the Massachusetts Medical Society on the Lowell petition, and claim an appeal to the Society at large at their next annual meeting, and request that this protest may be entered on the journal, because the Counsellors have no power to act for the Society in the matter.

W. J. WALKER,
W. STRONG,
GEORGE CHOATE.

On motion of Dr. Hale, it was

Voted, That the Corresponding and Recording Secretaries and the Librarian be a Committee to ascertain and report to the Society at the next annual meeting, the number of Fellows then residing in each county, and within the limits of each District Medical Society, and the number of Counsellors to be elected in each.

Drs. Morrill and Jeffries were appointed a Committee to audit the Treasurer's accounts.

Drs. Strong and Reynolds were appointed a Committee to examine the library.

Drs. Putnam, Smith, and Hooker, were appointed a Committee to procure kine pock matter for the use of the Society.

Voted, To dissolve the meeting.

GEORGE W. OTIS, JR., *Recording Secretary.*

MAY MEETING, 1841.

A stated meeting of the Counsellors of the Massachusetts Medical Society was held at the Society's room, Tremont street, May 27th, at 10 o'clock, A. M.

The records of the last meeting were read.

The Corresponding Secretary reported the names of the gentlemen who had become Fellows of the Society since the last meeting of the Counsellors.

Voted, To proceed to the choice of officers for the ensuing year.

Drs. Dalton, of Lowell, Flint, of Boston, and Coffin, of Lynn, were appointed Scrutineers.

RUFUS WYMAN, of Roxbury, was chosen *President.*
STEPHEN BATCHELDER, of Royalston, *Vice President.*
SOLOMON D. TOWNSEND, *Corresponding Secretary.*
GEORGE W. OTIS, JR., *Recording Secretary.*
WOODBRIDGE STRONG, *Treasurer.*
SAMUEL MORRILL, *Librarian.*

Censors for the Society at large, and the First Medical District, Drs. A. L. Peirson, Z. B. Adams, John Jeffries, Anson Hooker, Winslow Lewis, Jr.

For the Second Medical District, Drs. John Green, B. F. Heywood, C W. Wilder, Benjamin Pond, William Workman.

For the Third Medical District, Drs. S. W. Williams, David Bemis, Benjamin Barrett, Gardiner Dorrance, John Appleton.

For the Fourth Medical District, Drs. H. H. Childs, Royal Fowler, A. G. Welch, Robert Worthington, N. S. Babbitt.

Committee on Publications, Drs. Enoch Hale, John Homans, D. H. Storer.

Committee on Resignations, Drs. Woodbridge Strong, Z. B. Adams, John Jeffries.

Dr. Stephen W. Williams, of Deerfield, was chosen to deliver the next annual discourse.

The Report of the Treasurer was read and accepted.

The Report of the Censors for the Society at large, and the First Medical District was read and accepted.

The petition of the Fellows residing in Nantucket to be discharged from the Southern District Medical Society, and that Nantucket be no longer included in that District, was granted.

Dr. Hale, from the Committee appointed to memorialize the Legislature on the subject of the registration of births, deaths, &c., presented the following Report, which was read and accepted:

The Committee appointed to present to the Legislature the Memorial of the Counsellors, on the subject of a more effectual registration and return of births, marriages and deaths, respectfully report:

That the Memorial was presented in the Senate of the Commonwealth, at the same time with a similar Memorial from the American Academy of Arts and Sciences. The Memorials were referred to a Committee of the Senate, who received the subject favorably; but in consequence of the shortness of the session, they thought it best to propose a reference of it to the next Legislature. The Committee, therefore, respectfully recommend that a Committee be appointed to continue their attention to the subject, and to take the requisite measures, in conjunction with the Committee already appointed for the same purpose by the American Academy, to obtain, if possible,

the action of the Legislature upon it at the next session. The Committee would also hope, that the individual members of the Society will, as they have opportunity, give such explanations of the utility and importance of the proposed improvement as shall aid in obtaining its accomplishment.

ENOCH HALE, *for the Committee.*

Boston, May 27, 1841.

Drs. Hale, Alden and Storer were elected the Committee.

On motion of Dr. Choate, it was

Voted, That the Treasurer, in concurrence with the President, shall have the power to settle with all such Fellows as owe more than four annual assessments, either by remitting the whole or any part thereof, or by taking any legal measures according to their judgment. This vote to continue in force one year.

The following Report of the Committee on the subject of procuring a room for the use of the Society, was read and accepted:

The Committee appointed at the last meeting of the Counsellors to procure and contract for a room for the Counsellors' meetings, beg leave to report:

That they have attended to the duty assigned them, and have procured a room in the Temple, for the sum of $125 per annum; with the use of the large hall in that building for the annual meetings of the Society. The latter without additional expense, so long as it is not permanently occupied.

Which is respectfully submitted.

By order of the Committee.

JOHN C. WARREN, *Chairman.*

Boston, May 26, 1841.

On motion of Dr. Spooner, it was

Voted, That a Committee be appointed to consider the subject of the collection of future assessments in District Societies.

Drs. Spooner, Choate and Workman were appointed this Committee.

It was

Voted, That the Librarian be authorized to supply new members with the eleventh volume of the Society's publications at the price of one dollar.